

MOTOR AGE

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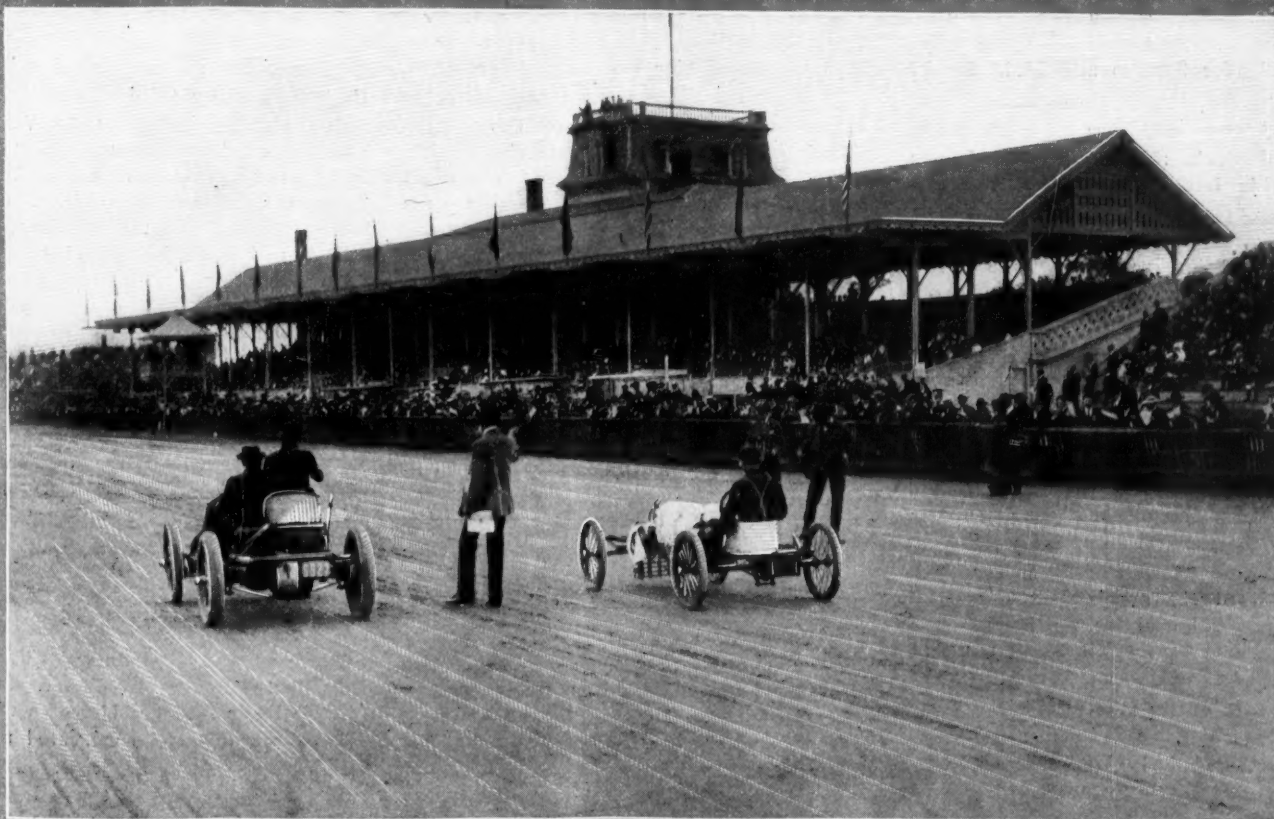
RECORDS GO AT PROVIDENCE

Providence, R. I., Sept. 9—Three new aspirants for track racing fame made their debut at the annual meet of the Rhode Island Automobile Club at Narragansett park today. All three scored world's track records in their respective classes and brought about one of the greatest all-around slaughters of previous best figures ever scored at an American meet. When

a world's straightaway kilometer record at Ormond last January, put up new figures from 2 to 10 miles, both inclusive, in place of those scored by Barney Oldfield and the Bullet at Denver, Col., Oct. 19, 1903, when he made 4:44 for 5 miles and 9:32½ for 10 miles.

Henry Ford's 20-horsepower Ford, piloted by Frank Kulick, established new records up to

away mile steam record at Ormond, beat George C. Cannon's former records made at this track, Sept. 26, 1903, for steam machines from 1 to 5 miles, both inclusive. The former figures were 1:01 for the mile and 5:56¾ for 5 miles. Though no official time was taken for Ross in the trial heat of the free-for-all, in which he was beaten by the Mercedes, outside watches



THE RACE MEET AT NARRAGANSETT PARK—START OF SECOND HEAT OF 5-MILE OPEN

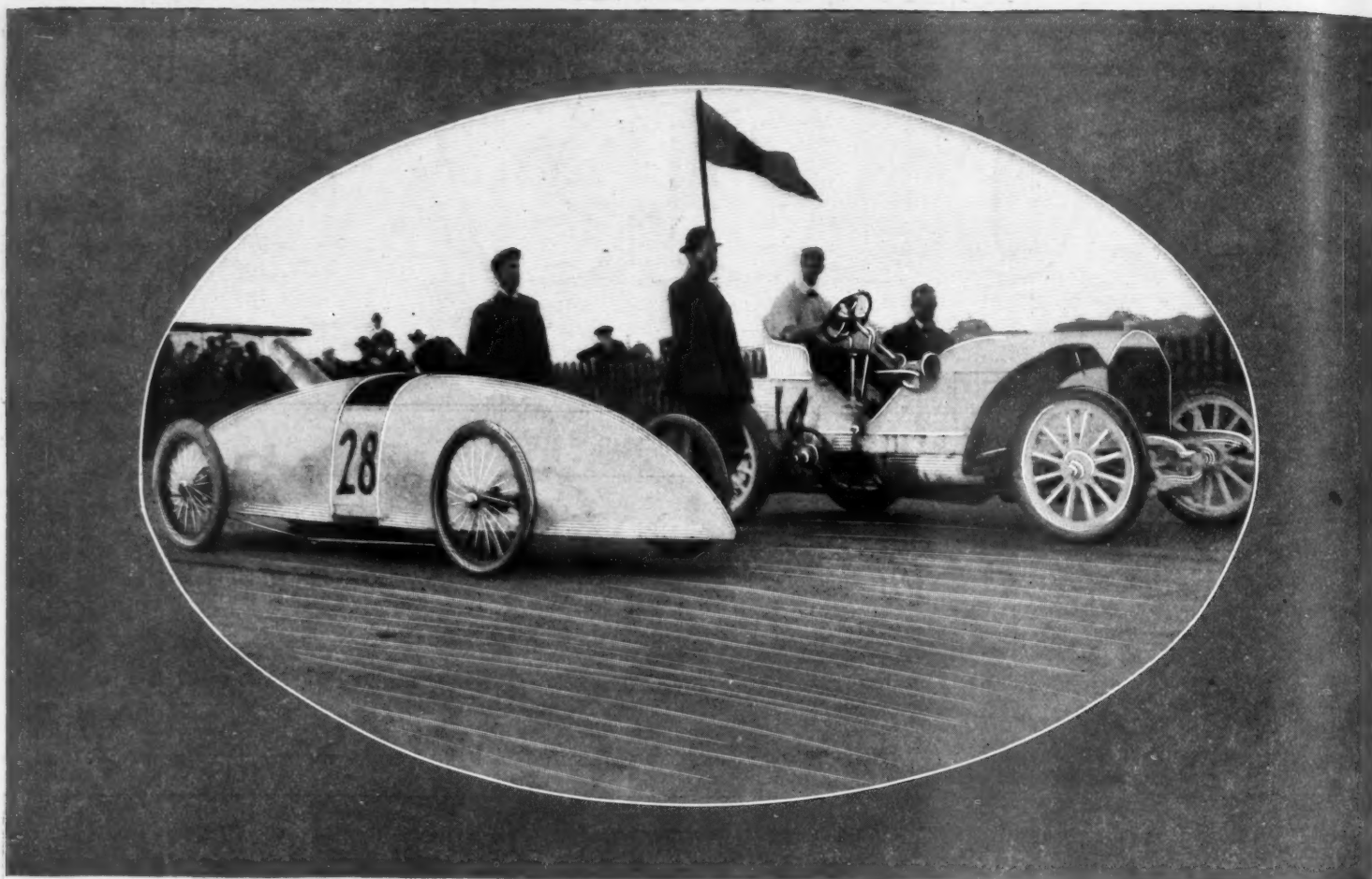
the killing was over the 52¾ seconds for the mile made by Earl Kiser and the Winton Bullet was the only all-around world record left on the slate up to 10 miles.

H. L. Bowdin's new 90-horsepower Mercedes, driven by Charles Basle, who piloted Mr. Bowdin's 60-horsepower Mercedes when it scored

and including 5 miles for gasoline cars from 551 to 881 pounds. These figures might be compared with those of Dan Wurgis at Syracuse, N. Y., Sept. 12, 1903, when he scored 5:56¾ for 5 miles for cars under 1,200 pounds, according to the old classification.

Louis S. Ross, holder of the world's straight-

held by Alfred Reeves, Henry Goodman, Louis R. Smith and a member of the Chronograph Club showed figures far under those secured by J. L. Hedges in a White at Cleveland, Sept. 5, 1903, when he made 12:20¾ for 10 miles. The outside watches in question showed 6:16¾ for 6 miles, 7:17 for 7 miles, 8:16¾ for 8



THE ROSS-STANLEY STEAMER AND THE BOWDEN MERCEDES AT THE START OF THE 10-MILE FREE-FOR-ALL

miles, 9:28% for 9 miles and 10:12 for 10 miles.

Basle's fastest mile was :54; Kulick's, 1:00%; and Ross's, :57%. All three of these were made in intermediate miles. The new records made appear in full in the annexed table.

The matter of timing and acceptance of records came up for considerable discussion among the track racing experts in attendance at the meet. Among those taking part in the discussion were: W. E. Metzger, Alfred Reeves, Fred Wagner, Arthur Jervis, S. A. Miles, L. R. Smith, Henry Goodman and A. G. Batchelder. The consensus of opinion was that the racing board, now that the figures are getting down so fine, should give a much closer surveillance of the timing and go much slower in accepting records than it has in the past. Metzger favored the appointment of official timers, who should hold the watches or operate a timing apparatus at all circuit meets at the expense of the promoter.

In the matter of the mile record it was the opinion of the majority that intermediate miles, whose times can easily be juggled or mixed by unscrupulous or incompetent watch holders and cannot well be checked by the watches of the spectators, should not be accepted as records and that only those mile times should stand which were made in races or trials at that distance or in the first mile of such trials or races. The European record rule will not allow records for any fraction of the distance. For instance, a man cannot get a kilometer and a mile record in the same trial. This, however, may be a trifle strenuous since two timing devices can easily be set up at once; but it errs on the right side. Intermediate records picked out at random from the middle of a race or trial are not accepted by the National

Cycling Association in cycle contests.

As is always the case at these meets the tournament was the Mecca of trade, race-following and journalistic enthusiasts with in a night's ride of Providence. The night boat brought up a big crowd of New York racing "fans." There were, of course, the usual club runs from Boston and all the towns within a hundred miles of Providence.

The Crown hotel presented lively scenes from the arrival of the visitors this morning until far into the night.

A threatening morning brought fear to the hearts of the pilgrims and promoters. The rain that seemed imminent all the morning, however, did not come. Despite all this there were not far from 5,000 spectators on hand. Close to a hundred automobiles lined the stretch on either side of the track and as many more were packed behind the stands. The programme was an unnecessarily long one, with heats and finals totaling nineteen events. There were many heats which could have better been combined in a single race instead of practically a series of matches, and there were too many matches and trade events of little interest to others than the participants, their friends or the sellers of the cars. With all its annual record-breaking the Providence meet is too big to have room for such trifles. Good management and a pair of hustling starters, however, saved the meet from prolongation beyond dinner time.

The race of the day was the free-for-all, though the class contents developed some record going and fine struggles. The Ross steamer and the Bowden Mercedes driven by Charley Meyer, of Cleveland, were the contestants in the first heat.

The little steamer got away quickly and led for a mile in 1:02; but was passed by

the Mercedes in the second mile. At 5 miles Ross was a third of a mile to the bad. In the eighth mile Ross lost a rear tire, but pluckily continued on the rim to the end, though the spectators held their breath fearing a catastrophe momentarily. It did not come, however, and the Stanley finished but a mile and a sixteenth behind the big German juggernaut, which covered the 10 miles in 9:23%. This was a new world's record from 5 miles to the end. The figures were beaten by it in the final, so the intermediate times are not quoted.

The second heat had for starters the 60-horsepower Pope-Toledo which has been entered for the Vanderbilt cup, and Frank Durbin's Stanley as starters. A. C. Webb drove the Toledo. In the eighth mile his car lost a tire, but Webb kept on and won the heat in 11:02%.

The final had for starters the Mercedes and the Ross Stanley. The Toledo was out of commission through its previous mishap and Ross started as the faster loser. In this race Charles Basle held the Mercedes wheel. The record set forth and commented upon above was the result of this race. The steamer made a plucky fight, but was beaten over a mile. The timers did not take Ross's time and so robbed him of an undoubted world's record from 6 to 10 miles for steamers, he having in a previous race captured the figures up to and including 5 miles.

H. L. Bowden's great 90-horsepower Mercedes made its American debut in the first heat for the heavyweights. It was driven by Charles Meyer, of Cleveland, and had for its opponent A. C. Webb and the 60-horsepower Toledo. The German made an impressive showing, gaining an eighth of a mile a lap until the last when the Toledo held it, being beaten by % of a mile. A temporary spurt of the

Toledo in the first round brought it even and the Americans cheered. The patriotic joy, however, was short lived for the Dutchman quickly pulled away. Webb had a hard time of it in the rear, being obliged to drive through a heavy dust cloud. The time of the winner was 4:50%.

The little 20-horsepower Ford made a splendid race of it in the second heat, against Wallace's 30-horsepower Renault, dubbed on the programme Black Death. For 3 miles the little fellow hung to the heels of the big Frenchman and by cutting in at the turns got on even terms with it. At this point, however, the Ford batteries, which were new and had been neglected, gave out and the American kid car had to stop while at the very heels of the foreigner. Kulick was greeted with cheers and horn tooting, when he returned to the stretch. The Renault won in 6:14%.

In the final heat Joseph St. George was at the wheel of the Renault, which was given the pole, with the Mercedes in the middle, and the Toledo on the outside. The Mercedes was first away and soon had a commanding lead. All eyes then centered on the struggle between the French and the American flyers. For 5 miles the Renault led by from 10 to 20 yards and was then passed by the Toledo, which, however, quickly lost its lead. As the pair rounded the last turn before the bell for the last mile Webb showed a magnificent bit of driving, took the lead and beat out St. George by a sixteenth of a mile. The Mercedes was an easy winner in 4:41%. Its intermediate miles were run in :50%, 1:54%, 2:48% and 3:45%. This was record for 3, 4 and 5 miles, but the car beat them all later.

Wallace and Kulick met again in the final of the 5-mile race for the 881 to 1,432-pound class. This time the Ford batteries were

WORLD'S RECORDS AFTER PROVIDENCE MEET

FREE FOR ALL

Miles.	Time.	Driver.	Car.
1	0:52 4/5*	Ear Kiser	Winton
2	1:53 2/5	Charles Basle	Mercedes
3	2:47 2/5	Charles Basle	Mercedes
4	3:42 2/5	Charles Basle	Mercedes
5	4:37 2/5	Charles Basle	Mercedes
6	5:32 1/5	Charles Basle	Mercedes
7	6:26 4/5	Charles Basle	Mercedes
8	7:21	Charles Basle	Mercedes
9	8:17	Charles Basle	Mercedes
10	9:13	Charles Basle	Mercedes

*Old record.

GASOLINE CARS, 551 TO 881 POUNDS

Miles.	Time.	Driver.	Car.
1	1:00 3/5*	Frank Kulick	Ford
2	2:04	Frank Kulick	Ford
3	3:06 2/5	Frank Kulick	Ford
4	4:07 4/5	Frank Kulick	Ford
5	5:09 4/5	Frank Kulick	Ford

*Second mile in this race. First mile in 1:04 1/5.

STEAM CARS

Miles.	Time.	Driver.	Car.
1	0:57 4/5*	Louis S. Ross	Stanley
2	2:05 3/5	Louis S. Ross	Stanley
3	3:06 3/5	Louis S. Ross	Stanley
4	4:07 4/5	Louis S. Ross	Stanley
5	5:08 3/5	Louis S. Ross	Stanley

*Intermediate miles in final heat of free for all. First mile in 1:05 1/5.

all right and there was a different story to tell. Kulick took the lead at the pistol and at 2 miles led the Renault 1-16 mile. Holding this margin to the end the American car, which weighs 875 pounds, won and scored the world's figures for light cars all the way up to 5 miles, set forth in the annexed table of new records.

William Wallace as a matter of course had a runaway with his 30-horsepower Renault against the little 10-horsepower Cameron

driven by its name-giver in the 5-mile race for the 551 to 881 class. He lapped him at 4 miles and beat him out another quarter of a mile in the last circuit. Though the time was but 5:21% Wallace rode all of his miles out, the first two in less than 1:02, scoring 1:00% for the last.

Frank Kulick in the Ford car beat F. F. Cameron and his namesake car in the 5-mile race for 551-881 pound machines. He lapped him entering the fifth mile and gained another sixteenth the last mile. The time was 5:27%.

C. D. Snoso won the 5-mile contest for Stevens-Duryea cars from W. J. Chapman in 7:44%.

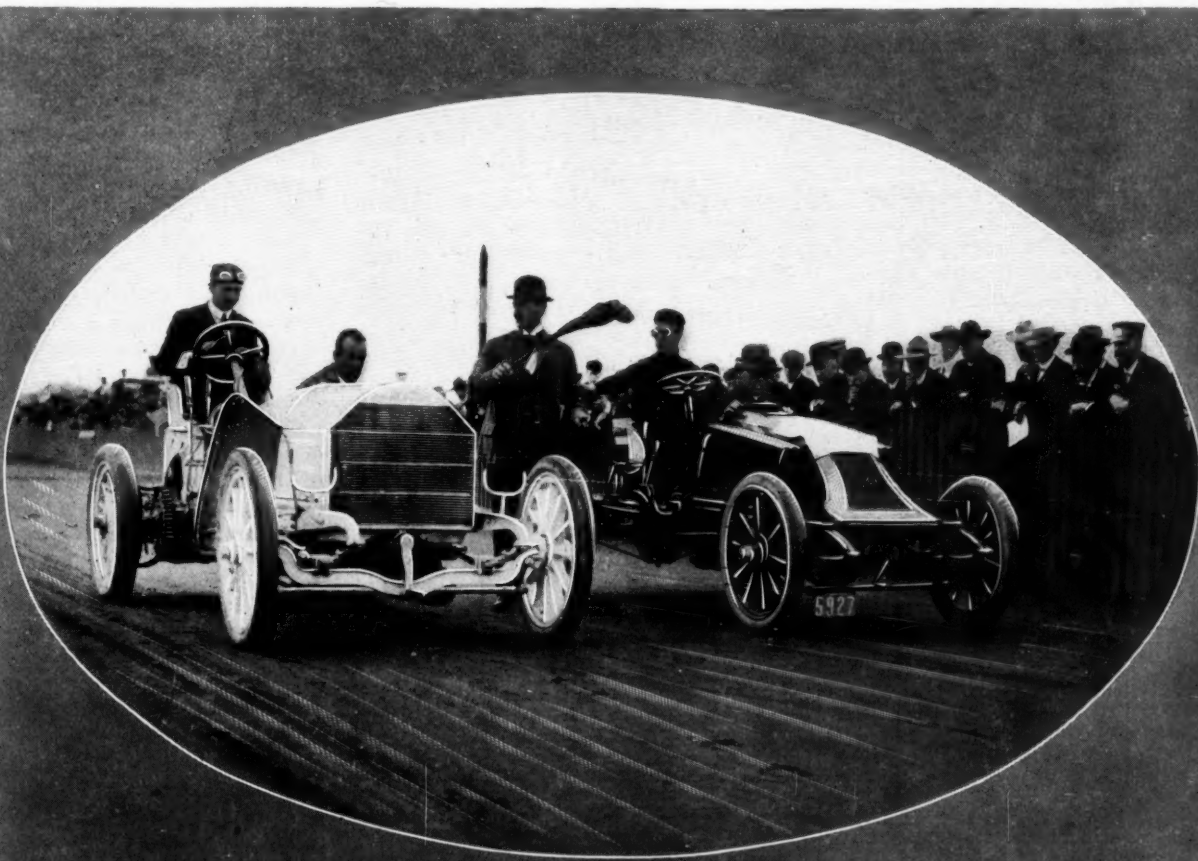
A. S. Lee, Pope-Toledo, easily beat J. A. Foster and his Winton quad in a match race at 5 miles for touring cars. His time was 6:31%. He also won a similar victory over H. E. Rogers, Peerless, by an eighth of a mile in 5:58%.

The special 5-mile race for Franklin cars went to Edward Dauer, driving for Dr. Walter L. Monro, who beat H. A. Capron, Jr., piloting Lincoln Lippitt's car, in 7:44%.

A. E. Morrison, Peerless, who essayed a 5-mile match race with a fully equipped Pope-Toledo touring car driven by A. S. Lee, dropped out after the first mile, leaving his opponent to finish alone in 6:25%, a 47-mile-an-hour clip. Both of the new Peerless vibrators went out of commission, causing the stop.

Tom Fetch drove "Old Reliable" Packard, holder of the 1,000-mile non-stop record, a 5-mile exhibition in 6:43%.

W. B. Snow in a special electric beat J. M. Clarke in a Pope-Waverly an eighth of a mile in five in 2:15 in the race for electrics, which opened the racing.



THE MERCEDES AND THE RENAULT BEING STARTED TO SCRAP OUT THE FINAL OF THE 5-MILE OPEN

MOTOR AGE

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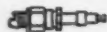
The sport of automobile racing has progressed to a point at which there are race meet promoters all over the country. The sport, from a small beginning, has grown rapidly. This growth includes the very natural element of

AN END TO OUTLAW RACE MEETS racing that is not sanctioned by the governing body. There are numerous meets of the character that are termed "outlaw." There is no evil intention on the part of the promoters of these meets. Many of them are promoted by clubs, and by fair associations which seek only to provide interesting sport for the local devotees. At the same time the promotion of unsanctioned races tends toward a danger—the danger of killing the usefulness of the controlling body.

More cognizance than is at present taken of outlaw racing is necessary. The American Automobile Association should be more on the alert to prevent outlaw race meets, by being ready and determined to punish by disqualification those who participate in them.

Local club men should have more pride in the controlling body, of which they are members by virtue of their membership in the clubs which are members of the A. A. A., than to encourage, by their participation, outlaw racing, even though they feel well satisfied in their own minds that they will not be brought to task for such participation.

More determined effort on the part of the American Automobile Association, and more encouragement on the part of club men affiliated with the American Automobile Association, would rapidly dissipate outlaw racing and lessen the temerity of strictly outsiders to promote outlaw races without regard for the controlling body.



French automobile manufacturers are planning more or less novel exhibits for the annual automobile show to be held in Paris, December 9 to 25, with view to rendering the show more interesting to visitors and more instructive to the motorists. For the first time in the history of automobile shows the manufacture of cars will be shown to the public within the

Serres de Paris, which will supplement the Grand Palais as a show building.

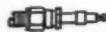
One concern has decided to install a motor manufacturing shop similar in layout to its factory and where workmen from the factory will be seen engaged at the processes required in making a complete motor. A motor car builder will have some of his men at work upon the chassis; a tire manufacturer will put up a small tire making plant, where sets of motor car tires will be made; another large company intends to show a miniature reproduction of its whole factory. Motor boats and motor boat motors will be shown in operation, while a large water basin will be installed if there is sufficient room, in which motor boats will be tested.

This graphical demonstration of the processes and methods of the motor trades has both advantages and disadvantages. Its general adoption by show exhibitors would be a doubtful benefit to shows and to the trade.

That it would create a certain amount of new interest in automobile shows is certain. Whether this new interest would be of the order that is profitable to the exhibitor is a debatable question. If it were not, there is no good in the scheme, except that, perhaps, of the good to the box office.

Then, also, taken for granted that the stimulated interest would result profitably on account of increased sales, it must be considered whether this increased profit would be sufficient to offset the losses that might occur in other directions.

The automobile industry in every country has grown to such proportions that its show halls are not big enough to allow the giving of much space to each individual manufacturer. Then comes the point as to whether the exhibitor can as well show the goods he has to sell by the method of illustration of processes of manufacture as by showing the finished goods he is ready to deliver to the customer. He cannot do both well in a few square feet of space.



The latest returns of the government statisticians show that the exports of automobiles in July last were valued at \$183,180, as against a value of \$159,739 for the same month of last year.

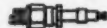
During the 7 months' period ending with July the exports were valued at \$1,154,196, as against a value of \$878,179 for the same period of 1903 and \$714,230 for the first 7 months of 1902.

Every succeeding month shows a substantial increase in the value of the shipments of automobiles abroad, and in this connection it is highly gratifying to observe that our automobile manufacturers are becoming more familiar with the requirements of foreign markets; yet there is much to be learned by a majority of those who desire to obtain a market abroad for their machines.

The seller must seek the buyer, must minister to his wants and produce what he desires. No manufacturer will hereafter find a market for his machines if he waits for the buyer to come and solicit his favor.

If American automobile manufacturers expect to figure largely in the markets of the world they must send men equipped in their particular branch of industry to study the conditions in every country. The commercial traveler is the most important element in the

extension of our foreign trade, but to be effective he must be a man who knows the language of the country to which he is sent, who is thoroughly familiar with the economics of the manufacture of the product he represents, and he must remain long enough to comprehend the business conditions of the people whose trade he desires to secure before his opinions can be safely accepted as correct.



In the Readers' Clearing House of MOTOR AGE of this issue will be found a communication from a reader who is rather inclined to deprecate the value of the information given by MOTOR AGE in this department to inquirers upon subjects of a more or less technical nature. The correspondent's criticisms are answered but briefly in connection therewith, because MOTOR AGE does not wish to enter into an endless discussion over matters which are somewhat debatable.

There is, however, one point which MOTOR AGE wishes to emphasize in this connection. It is that in handling the answers to inquiries MOTOR AGE does not attempt to pose as absolute authority on points in which there is an existing difference of opinion, as for example the relative values of the make-and-break and jump spark systems of ignition of automobile gasoline motors.

Whatever technical advice is given in this department is given in each case with view to best helping the particular person who makes the inquiry, the advice often not being absolute but being given with regard to the individual circumstances as they are presented to MOTOR AGE. All of this matter is carefully considered by a man of considerable experience and ability and who also has ample resources upon which to draw, if necessary, for information of a peculiar nature.

No attempt is made to show a wisdom in these matters superior to that of anyone else. When a reader asks a question, MOTOR AGE does its best to give him the best information according to his particular needs. If this information differs somewhat from the beliefs of some third party there is no help for it.

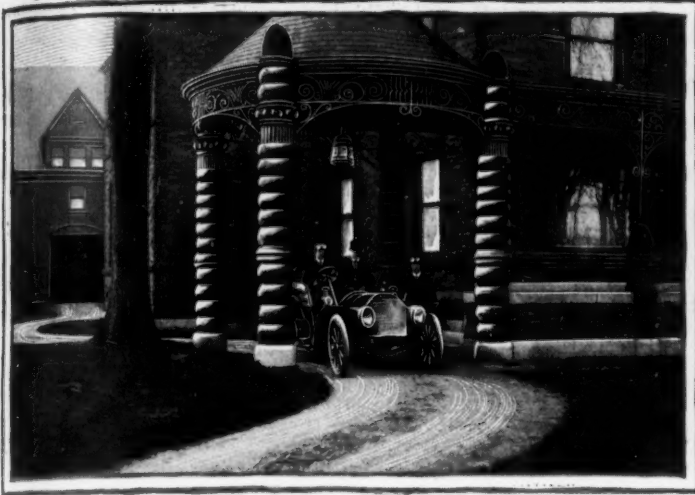
In an industry so young as the automobile industry and containing so many debatable and unsettled points it would be folly to attempt either to satisfy the beliefs of all or to pose as an infallible judge and expert.

It is obvious enough to see that MOTOR AGE would have no object in intentionally seeking to give any reader wrong information, even for the sake of boosting a hobby. MOTOR AGE takes the stand that it is the purpose of the class paper to help, rather than to dictate.

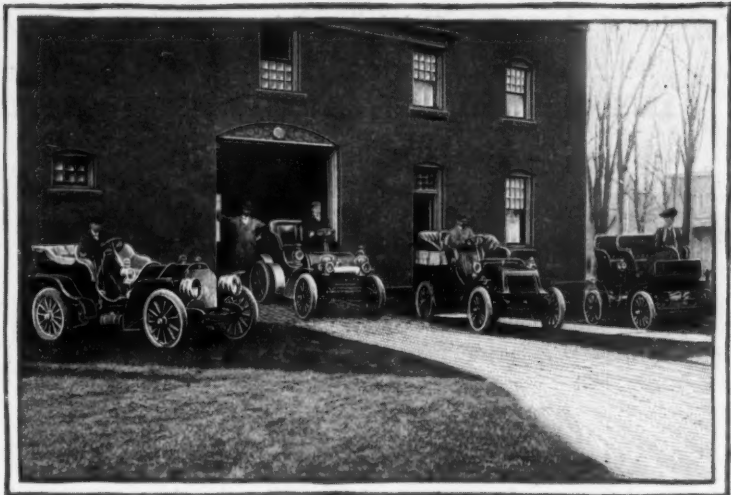
The readers of MOTOR AGE seem to appreciate the Clearing House Department, and MOTOR AGE will do all it can to increase the usefulness of this department. That it will occasionally publish information which will displease some advocates of certain systems of construction, goes without saying.

In general reply to those who cast reflections upon the judgment of MOTOR AGE in the character of the information furnished in this department, it need only be said that MOTOR AGE makes no attempt to boost any system or class of construction at the expense of another which has adherents in the trade, but simply endeavors to furnish honestly the best information it can to the different inquirers.

FAST WORK ON THE ROAD TO FAME



MR. STEVENS AT HIS RESIDENCE



THE STEVENS MOTOR STABLE

To most men the road to fame is long and the journey slow; to Samuel B. Stevens the road was only 10 miles long and was covered at the rate of 90 miles an hour. Until he entered the automobile races at Ormond last February Mr. Stevens had never taken part in any racing events which brought him prominently before the public, and his appearance at these races was naturally in the beginning a matter of small interest to all except his personal friends.

This indifference, however, quickly disappeared when he began to qualify for the most important events and lower records made by the world's best drivers. Then spectators and drivers began to realize that he was an unknown quantity to be taken seriously, and when, in the 10-mile handicap, he drove his 60-horsepower Mercedes over the course in 7:28½, and winning one of the most sensational races of the tournament, his position in the history of automobile racing was established.

In the subsequent events at Ormond Mr. Stevens was a conspicuous figure. His coolness, daring and skill in handling his powerful machine in the closely contested and exciting races compelled the admiration of experienced drivers.

Mr. Stevens is the only son of former Senator James Stevens. He is 29 years old and has always resided in Rome, N. Y., where he has extensive interests in the iron industry. He is a mechanical and electrical engineer and a graduate of Harvard university. Ma-

chinery has always been his study and recreation, and his inventions are numerous and important. With such tastes it was but natural that he should be one of the first in his city to become interested in automobiling and that his interest should develop into enthusiasm. The study of automobile construction has from the first interested him deeply. He has at different times owned many machines, each of which he has rebuilt and improved.

The Mercedes which he used at Ormond was rebuilt by him and subjected to many important changes, and the chief gratification that he finds in his winnings there lies in the practical demonstration of the value of these improvements. The earnestness with which Mr. Stevens follows this line of study and experiment is shown by his workshop, which is probably the most extensive machine shop in the state operated exclusively in the interest of a private garage. It is situated in the basement of his house, and in it are lathes, saws, punches, drills, forges, motor and numberless machinists' tools—everything needed for the construction of any part of, or even a complete automobile.

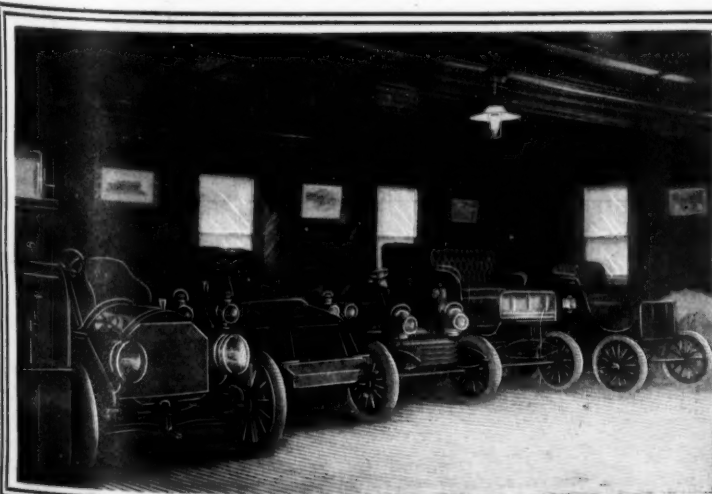
Here in grease, grime and overalls he spends several hours each day when at home, making repairs, solving the problems which confront him and fashioning with his own hands the parts which will improve his machines. His garage, situated in the rear of his residence, surrounded by green lawns and shaded drives, is a handsome two story brick building, 70 feet in length by 40 feet in

width. On the first floor are housed his automobiles, which at present consist of a Waverly electric runabout; a 20-horsepower Darraq landaulet; a 35-horsepower Darraq with double phaeton body, and a 60-horsepower Mercedes, Mr. Stevens having recently sold three of his machines.

On the side of the room opposite the door are three oil and gasoline pumps, each enclosed in a handsome roll top cabinet. The interior is handsomely finished in natural wood and lighted by electricity. On the second floor are offices and sitting room for his chauffeur. Throughout the establishment is that neatness and order that marks the methodical man.

Mr. Stevens is fond of horses, automobiles and sailing and finds keen enjoyment in most events that are conducted on legitimate lines and where merit wins. He is a good sailor, and a trim yacht, flying before a fresh breeze, with all sails set and the lee scupper awash, to him typifies one of life's keenest enjoyments. He is a member of the New York Yacht Club, and those of his friends who receive invitations to accompany him on his cruises rarely fail to accept, for his hospitality is that hearty kind that insures the comfort and pleasure of every guest.

Mr. Stevens is modest and disposed to talk of anything rather than himself. He is generous and hospitable, an interesting talker, a clear thinker and untiring worker, giving the best there is in him to the work in hand and commanding success by application.



THE STORAGE ROOM



THE WELL EQUIPPED REPAIR SHOP

SMALL CARS ON TRIAL

English Reliability Trials of Light Automobiles Bring Out Some Successes and Some Failures—Tests Extremely Severe—First Half of the Contest Develops Some Surprise

London, England, Sept. 1.—The 615 miles reliability trials for small cars arranged by the Automobile Club of Great Britain and Ireland started August 29 and are to end September 3. Thirty-eight small cars were entered, but only thirty-five started, which is considered satisfactory, although more entries were expected. For last year's 1,000 miles trials 140 entries had been received, but then the contest was open to all classes of cars and the more powerful vehicles were in the majority. Much more attention was also paid to the big touring cars but nevertheless the performance of the small cars attracted widespread attention. Their sale took such extension that the Automobile Club of Great Britain and Ireland decided to hold this year's endurance trial for the small vehicles only.

The conditions taken into consideration this year for the awards are much simpler than those adopted last season, when more than a score of conditions were imposed. This year each car was to make a run of about 50 miles twice a day during 6 days, and the first prize will be given to the car which makes the greatest number of nonstop runs. If two or more cars make a similar number of non-stop runs then the first prize will be awarded to the car which makes the highest speed on the three timed hill-climbs of the trial. Only 20 minutes are allowed a car before the official start is given for adjusting and overhauling.

Certificates will be given to all the competitors and the highest number of points that can be won is 10,375, distributed as follows: Reliability, 3,000; cleaning and replenishing, 1,500; hill-climbing, 1,000; condition after trial, 1,000; fuel consumption, 500; speed on track, 500; absence of dust, 500; brakes, 250; steering, 250; absence of noise, 250; absence of vibration, 250; re-starting on hill, 250; finish and appearance before and after trial, 250; cheapness, 250; accuracy of horsepower, 250; absence of smoke or vapor, 250; general cleanliness of the motor and gear, 125.

The route chosen for the first day's test was from Hereford to Ludlow, passing through Hope-under-Dinmore—where a hill-climbing contest took place—Leominster and Brimfield. From there the road led to a railway bridge 2 miles beyond Ludlow, and then the return trip to Hereford was made over the same road. The thirty-five small cars were started at an interval of 20 seconds. Miss Dorothy Levitt, one of England's foremost women drivers, was given a hearty send-off when she started in one of the de Dion-Bouton cars. This was the only manifestation that occurred at the start. The first car to get into trouble was one of the Oldsmobiles. Something went wrong with the water circulation which caused the motor to overheat. Most of the cars climbed the Dinmore hill from the Hereford side without trouble. The hill is 5,340 feet long with an average grade of 5½ per cent, and 10 per cent at the steepest part of the hill. In class A, the 8-horsepower Horley made the fastest climb, the time being 5 minutes 3¾ seconds, or an average of 12 miles an hour. The 6-horsepower Jackson was the fastest car in

class B, going up in 6 minutes 24¾ seconds, or an average of 9¾ miles an hour. The 6½-horsepower Wolseley climbed the hill in 3 minutes 46 seconds, an average of over 16 miles an hour, and was thus the first in class C, while the 6-horsepower de Dion-Bouton, of class D made the climb in 3 minutes 41¾ seconds, or at a speed of 16½ miles an hour.

On the return trip there was another climbing contest on the same hill, but on the other side. In classes A, C, and D the winners were the same as in the first contest, but in class B the 6½-horsepower Service car proved the better climber, the time being 4 minutes 43¾ seconds, or an average speed of 11½ miles per hour.

When the cars returned to Hereford they were driven to the cattle market, where they were washed under the supervision of delegates from the club, who acted as observers. There was a large crowd of people on hand. Whatever may have been the feeling of the city people, an example of good feeling was given by the local fire department, which placed its steam engine at the disposal of the competitors. Six branches were attached to the end of the hose, which made it possible for six cars to be washed at the same time.

After having been cleaned the cars underwent a special weighing test, in which the load of each wheel was weighed separately, as well as the total weight of the car. This special test will be made every day and will serve to make a report of comparison between the distribution of weight on all the wheels of each car.

The daily runs are divided into morning and afternoon runs. During the morning run of the first day ten cars did not succeed in making a non-stop run, while during the afternoon test eleven cars were unsuccessful. The reason of the stops of these cars were the following: Forenoon run—Jackson car, ignition stop; Jackson car, stopped to help the other Jackson car; Service car, stopped three times on hill; Little Star, broken spark plug; Alldays, forced to stop on account of other car stopping in front; Downshire, broken clutch fork; Clyde and Alldays, punctures; Royal Enfield, seven stops on account of water connection being broken; Little Star, stopped to help companion. Afternoon stops—Jackson, three

stops to fill water tank and one stop to adjust trembler; Jackson, adjusting nut on inlet pipe; Oldsmobile, gave up; Pelham, broken water pipe; Horley, broken kerosene pipe and ignition trouble; Mobile, adjust inlet valve nut; Clyde, inlet valve loose; Royal Enfield, puncture; Alldays, tire trouble; Humber, carburetor trouble and getting kerosene.

There were thirty-one starters on the second day, when the cars went from Hereford to Worcester, 52 miles, passing Frome's hill, where there was a climbing contest; Stifford's bridge, and Leigh Sinson, thence back to Hereford, passing through Bromyard, Stoke Lacy and Burley Gate. It was a day of hard work for the little cars, which had to make the ascent of the Frome's hill twice, which is 2,812 feet long with an average grade of 8 per cent and a several hundred yards of 12 per cent grade. During the morning trial thirteen cars stopped in going up, while in the afternoon fifteen stopped. During the entire morning run seventeen cars did not make a non-stop run, while in the afternoon nineteen failed to do so. The troubles were about the same as those of the first day, except that ignition and valve troubles were more frequent. The only other serious accident befell the Rover, which had a broken camshaft wheel. Of all the cars, the 6½-horsepower Wolseley in class C made the fastest time, climbing the hill in 2 minutes 42¾ seconds, or an average speed of 11¾ miles an hour.

The 50-mile circuit on the third day was from Hereford to Ledbury and back to the starting point. The Dinmore hill was also climbed. Thirty-one cars started and twenty-one made a non-stop run during the morning, while in the afternoon only fifteen cars were successful. Ignition troubles, broken inlet pipe and water connections, cleaning carburetor, pumping tires, broken inlet valve cap and broken wires were some of the reasons the cars stopped. None suffered with any serious breakage, however. The general impression for the first half of the trials is that the small cars have made a very fine showing.

CARS IN THE TRIAL

CLASS A—CARS AT £125 OR LESS

Six-horsepower Jackson; driver and one passenger; one-cylinder motor; price £125—\$606.

Six-horsepower Speedwell; driver and one passenger; one-cylinder motor; price £126—\$615.

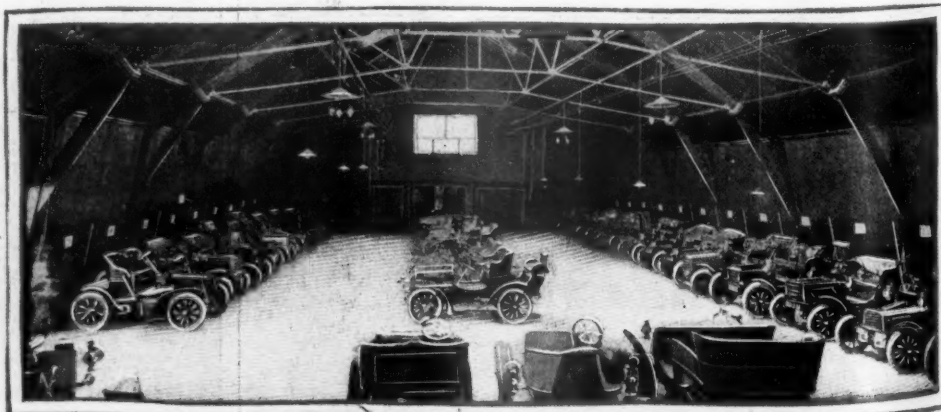
Eight-horsepower Horley; driver and one passenger; one-cylinder motor; price £125—\$606.

CLASS B—CARS AT FROM £125 TO £150.

Six-horsepower Jackson; driver and one passenger; one-cylinder motor; price £142—\$687.

Six-horsepower Vauxhall; driver and one passenger; one-cylinder motor; price £150—\$727.

Seven-horsepower Oldsmobile runabout; driver and one passenger; one-cylinder motor; price £150—\$727.



THE CARS IN DRILL HALL, HEREFORD, PRIOR TO THE START OF THE RUN



THE FINISHING POINT OF THE DINMORE HILL CLIMB

Six and a half-horsepower service; driver and one passenger; one-cylinder motor; price £150—\$727.

Six-horsepower Pelham; driver and one passenger; one-cylinder motor; price £150—\$727.

Eight-horsepower Horley; driver and three passengers; one-cylinder motor; price £143—\$703.

CLASS C—CARS AT £150 TO £175.

Six-horsepower Wolseley; driver and one passenger; one-cylinder motor; price £175—\$849.

Six-horsepower Mobile; driver and one passenger; one-cylinder motor; price £175—\$849.

Eight-horsepower Mobile; driver and one passenger; one-cylinder motor; price £175—\$849.

Nine-horsepower Speedwell; driver and one passenger; one-cylinder motor; price £175—\$849.

Seven-horsepower Swift; driver and one passenger; one-cylinder motor; price £175—\$849.

Seven-horsepower Little Star; driver and one passenger; two-cylinder motor; price £175—\$849.

Six and a half-horsepower Royal Humberette; driver and one passenger; one-cylinder motor; price £157—\$764.

Seven-horsepower Alldays; driver and one passenger; one-cylinder motor; price £165—\$800.

Six-horsepower Siddeley; driver and one passenger; one-cylinder motor; price £175—\$849.

Seven-horsepower Downshire; driver and one passenger; two-cylinder motor; price £170—\$825.

Six-horsepower Wolseley; driver and one passenger; one-cylinder motor; price £175—\$849.

Seven-horsepower Clyde; driver and one passenger; one-cylinder motor; price £175—\$849.

CLASS D—CARS AT £175 TO £200.

Six-horsepower de Dion-Bouton; driver and one passenger; one-cylinder motor; price £200—\$970.

Six-horsepower de Dion-Bouton; driver and one passenger; one-cylinder motor; price £200—\$970.

Eight-horsepower Mobile; driver and three passengers; one-cylinder motor; price £200—\$970.

Nine-horsepower Oldsmobile; driver and two passengers; one-cylinder motor; price £200—\$970.

Seven-horsepower Swift; driver and one passenger; two-cylinder motor; price £200—\$970.

Eight-horsepower Royal Enfield; driver and one passenger; two-cylinder motor; price £200—\$970.

Nine and one-half-horsepower Cadillac; driver and three passengers; one-cylinder motor; price £199—\$968.

Ten-horsepower Chilton; driver and one passenger; four-cylinder motor; price £195—\$945.

Ten-horsepower Croxsted; driver and one passenger; two-cylinder motor; price £200—\$970.

Nine-horsepower Anglian; driver and two passengers; one-cylinder motor; price £200—\$970.

Seven-horsepower Alldays; driver and two passengers; one-cylinder motor; price £180—\$873.

Eight-horsepower Rover; driver and one passenger; one-cylinder motor; price £200—\$970.

Seven and one-half-horsepower Royal Humberette; driver and one passenger; two-cylinder motor; price £200—\$970.

Six-horsepower Belsize; driver and one passenger; one-cylinder motor; price £184—\$890.

Eight-horsepower Slims; driver and one passenger; one-cylinder motor; price £200—\$970.

Eight-horsepower Prosper-Lambert; driver and one passenger; one-cylinder motor; price £185—\$897.

Seven-horsepower Little Star; driver and one

passenger; two-cylinder motor; price £190—\$922.

Twenty-three out of the thirty-eight cars are fitted with Dunlop tires, three with North British tires, two with Michelin tires, and the other cars with Fisk, Clipper, Continental, de Nevers and solid tires.

Ten cars are fitted with two forward speeds and reverse and twenty-four cars are fitted with three speeds and reverse. Twenty-six motors have automatic inlet valves; five have mechanical valves. Twenty cars have sliding gears with direct drive on the top speed; six cars have no direct drive on the top speed and four cars have epicyclic gears, with direct drive on top speed.

The speed of the motors vary from 700 to 1,700 revolutions per minute.

Thirty-two of the cars were made in England, three in America and three in France.

EMPIRE MEET PROGRAM OUT

Entry blanks have been sent out for the automobile meet to be given at the Empire City track on Saturday, September 24, and show the classes to be so arranged that every car has a chance to compete two or three times, while the contests are certain to be interesting to the spectators. The full programme of events is as follows:

Old Glory cup, 5 miles—American touring cars, any motive power, regular equipment, including tonneau; each car to carry three passengers in addition to the operator; if passengers are gentlemen, they must weigh not less than 150 pounds each; if ladies, they must weigh not less than 120 pounds each; operator must crank motor, start car and drive entire distance. First prize, Old Glory cup, value \$100; second prize, silver trophy, value \$50.

Yonkers cup, 5 miles—Open to cars of any mo-

tive power retailing at \$1,000 or less; regular equipment; removal of tonneau alone permitted; manufacturers entering cars must be prepared to sell them at catalogue price after the race.

Great Empire handicap, 5 miles—Open to all cars; won on October 3, 1903, by a Cadillac; on July 16 by a Peerless; first prize, Empire cup, value \$100; second prize, silver trophy, value \$50.

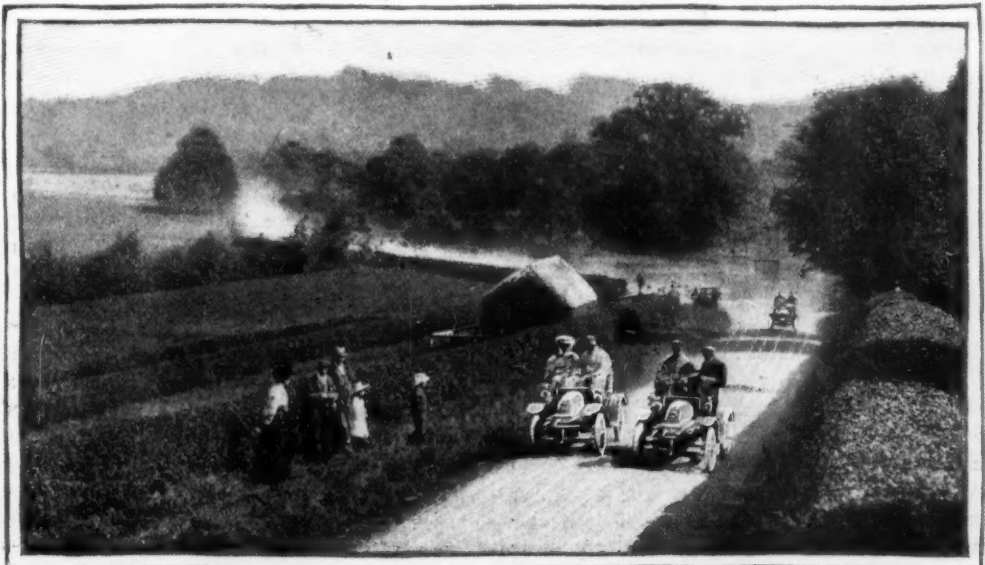
Knickerbocker cup, 10 miles—Open to all cars weighing from 881 to 1,432 pounds; first prize, Knickerbocker cup, value \$100; second prize, silver trophy, value \$50.

International cup, heats at 5 miles; final at 10 miles—Free-for-all; heats for cars of each country—America, France, England, Germany, Italy. Winners of each heat to receive a gold medal, where there is a race and to compete in final heat at 10 miles for the International cup; if only one car in a class, it shall be eligible to the final heat.

MT. WASHINGTON AGAIN

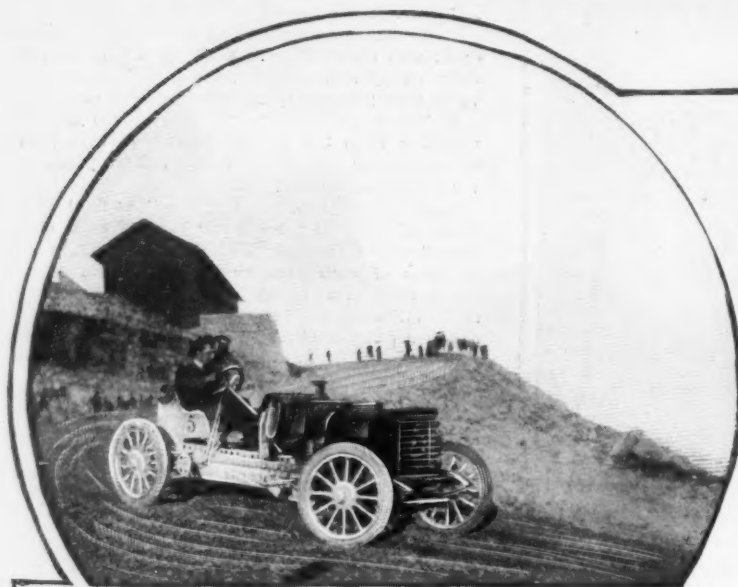
New York, Sept. 12—Senator Morgan returned from Bretton Woods today full of plans for the near and distant future. Another tour of the White mountains, with a banquet at the Mount Pleasant hotel October 1, as its rendezvous feature, is the nearest at hand. He says he has already been promised over twenty cars from here and Boston, from which touring parties are to start. Several days of touring through the mountains will follow the banquet, the objective point itself of the tours from distant points.

While at Bretton Woods the senator saw H. M. Flagler, of Florida, and Enrique Conill, president of the Havana Automobile Club, of Havana, Cuba. With them he arranged an amplification of the winter tournament program. The Havana clubmen, he says, are rabid enthusiasts, with ample financial backing. The plan now is to have a Cuban racing tournament, with a road race between Havana and San Cristobal as its chief feature. A 300-mile event is projected. The distance between the two cities is 60 miles. The road is a magnificent highway. The plan is to establish a control at each end, pending the arrival of all the cars, the least aggregate time for the five trips over the course to determine the winner. It is proposed to have the Cuban carnival several days after the close of the New York show and to set the date of the Ormond races ahead to make room for it. A straightaway racing tournament on the beach of the Isle of Pines, near Charleston, S. C., is now also under consideration as a windup to the winter racing. Motor boat racing in Havana bay and on the Halifax river, Florida, is included in the program.



BEGINNING THE ASCENT OF DINMORE HILL

THE VENTOUX HILL-CLIMING CONTEST



ROUGIER IN THE WINNING TURCAT-MERY

AT THE SUMMIT

Paris, France, Aug. 29—Another of the annual provincial meets is over and again the records took an awful tumble. It seems as if we are still far from the limit, for such is the general impression here today. The talk is not so much about the man who drove the victorious car, nor about this racing car, but almost entirely about the time made this year in comparison with the previous year's records.

The scene of the competitions was in the south, a few hours' ride from Marseilles, and to a southern concern and a southerner befell the honor and pleasure of showing the way up the mountain to the representatives from Paris, Italy and England. The Turcat-Mery racer, the same with which Rougier qualified in the French eliminating race and in which he finished fourth in the James Gordon Bennett race, the monster 100 horsepower "child of Marseilles," as they call the car, was the fastest machine of the twelve racing cars of different classes which took part in the hill-climbing contest.

The Ventoux hill, upon which the competition took place, is about $13\frac{1}{4}$ miles long, and while not graded so steeply as other hills it is considered one of the most difficult to climb on the continent. Soon after the start the grade is $2\frac{1}{2}$ per cent and within 3 miles becomes a 6 per cent grade. Then it suddenly drops to 4 per cent, with another abrupt rise to $9\frac{1}{2}$ per cent. At $5\frac{3}{4}$ miles the grade is

about 11 per cent and then gradually drops to $5\frac{1}{2}$ per cent at 11 miles. Then it goes up and down with a 10 per cent grade, about 1,000 yards from the top and a trifle over 13 per cent on the summit. There are five exceedingly sharp turns and five big holes which must be avoided. Thus is the hill which may seem rather easy on paper but which many drivers have refused to try to ascend.

On the first of the 2-days' meet only the tourists competed, while the second day was reserved for the speed merchants. There were twenty-one different racing cars and eleven motor cycles entered for the second day, but all told only eighteen competitors took part in the climb. The start was given at Bedoin, which could be seen without trouble from the top of the hill where the Ventoux observatory is located. The weather was superb and the sight never to be forgotten.

There were probably 400 spectators, of which more than half had remained on top of the hill all night, some taking a few hours' rest during the early morning by laying beside the road or by receiving the hospitality of the director of the observatory. The night had been too ideal to sleep and thus the majority stayed together and formed for the time being one great family.

One after the other the competitors were sent away, and it was intensely interesting to see the big and the small cars, the motor cycles

THE LAST TURN ON THE HILL

and the light cars come up, or attempt to come up, the hill. Rougier in the Turcat-Mery came up in 21 minutes 12 $\frac{3}{4}$ seconds, which represents a speed of more than 37 miles an hour or an average of 5 feet per second. Three years ago when the contest was first run Cauchard, in a 70-horsepower Panhard racer, made the fastest climb, his time being 27 minutes 17 seconds. Last year Danjean, in a Richard-Brazier light car, made the best ascend, the time being 25 minutes 25 seconds. In October of the same year Rougier broke that record in a Turcat-Mery car by climbing the hill in 24 minutes 50 seconds. And now he clipped off 3 minutes 37 $\frac{3}{4}$ seconds from his own record.

Duray, in the Gordon Bennett Darraq racer, was second, 28 2-5 seconds slower; Le Blon, in the Hotchkiss racer, was third in 22 minutes 29 $\frac{1}{4}$ seconds; the Fiat car with which Lancia competed in Germany was fourth, while Baras, in the Darraq; Achille Fournier, in a Hotchkiss and Maurice Fournier in the Wolseley Gordon Bennett racer also finished the climb. There was keen disappointment because two cars had accidents and a good deal was expected of them. They were the Clement-Bayard racer driven by Albert Clement, which had a wheel broken off in the first turn, and the new eight-cylinder Rochet-Schneider racer, which had to be stopped before the end of the fourth mile.

The Darraq cars were the fastest both in the light vehicle class and in the voiturette class. In the former Hemery won in 22 minutes 26 seconds from Hanriot, in a Clement-Bayard by nearly 4 minutes also breaking the former mark by 2 minutes 59 seconds. The Darraq driven by Albert won in the voiturette class in 29 minutes 59 seconds, breaking the former record by 13 minutes 36 2-5 seconds. Inghilbert on a Griffon motor cycle broke the former record for this class of machines by 9 minutes 31 2-5 seconds by climbing the hill in 32 minutes 20 $\frac{1}{4}$ seconds. Yourassoff on a Peugeot was second and Lamberjack on a

Griffon third, being but little behind.

The tourist competitions on the first day were slow, as compared with the performances of the speed kings. Thirty-three cars and motor cycles were entered, but only fifteen faced the starter. The Rochet-Schneider cars, of which there were three, made a fine showing, finishing first, fourth and fifth. Ollion, the winner of the Dauphine road race of a fortnight ago, was again in the front, having climbed the hill in 31 minutes 41 3-5 seconds, or 2 minutes 8 2-5 seconds faster than the second, Collomb, in a Mors. Bablot, in a Berliet, was third, 55 4-5 seconds slower. Lamberjack, on a Griffon motor cycle was the only one among the motor cyclists who climbed the hill without getting off his machine. His time was 51 minutes 17 3-5 seconds.

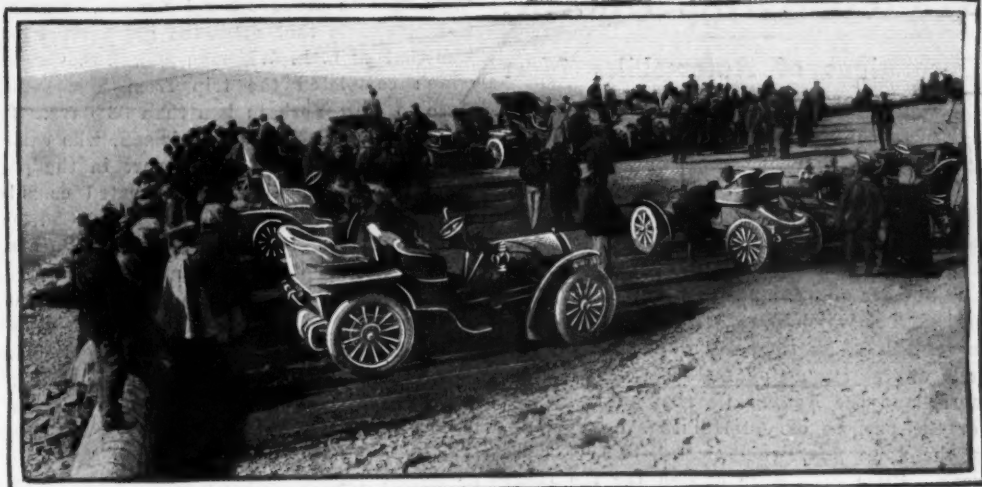
The meeting was one of the most successful in a sports way ever held in France, and while the crowd was not large, there were enthusiasts who had come from Germany, England, Italy and Belgium. Most of them think that the Ventoux hill-climbing contest is the most interesting among all similar events held in Europe.

DUTY ON PRIVATE CARS

Washington, D. C., Sept. 10—The treasury department has received from the collector of customs at the port of New York a series of inquiries regarding the free entry of automobiles imported into the United States. Assistant Secretary of the Treasury Keep has advised the collector as follows:

Automobiles of foreign manufacture brought to this country for touring purposes, whether by foreigners or residents of the United States, and whether accompanying the owners or not, if to be actually used by them in this country, are entitled to free entry under bond for a stay of 3 months, under the provisions of the circular issued by the department under date of June 20, 1902.

Under the provisions of a treasury decision of March 17, 1900, automobiles are classed as household effects, if used as such for the period prescribed by law. Automobiles used in business pursuits are not exempt from duty, as, under the provisions of paragraph 504 of the existing tariff act, the article must be a part of the household economy. In several cases heretofore before the department for decision household effects were defined as "articles which pertain to a person as a householder or to a family as a house-



SPECTATORS AT THE SUMMIT OF VENTOUX HILL, FROM WHICH THE STARTING POINT IS VISIBLE

hold, and do not include articles used in professional or business pursuits."

Automobiles used abroad as household effects as above for a period of 1 year or more, whether consecutively or not, and whether or not the 1 year of use abroad immediately precedes the importation, are free of duty upon the filing of the usual oath. Free entry of an automobile is accorded only to the actual automobile used by the owner for 1 year or more, and cannot be allowed in the case of an exchanged machine which has not been used by the owner for that period.

Automobiles are free of duty if used abroad for 1 year or more, although a period of a year or more may have elapsed since such use. Automobiles to be free of duty as household effects must have been used abroad for a period of 1 year or more by the owner or his family, whether driven by a chauffeur in his employ or not, but the use of an automobile by a chauffeur or friend unconnected with the owner or his family does not meet the requirements of the law.

NEW OLDS FACTORY UNDER WAY

Lansing, Mich., Sept. 8—The site for the new R. E. Olds Co. has been chosen and work has already begun for the erection of buildings. The immense plant occupies about 20 acres of land, extending from the Grand Trunk railway line to Baker street and from Washington street to the Lake Shore & Michigan Southern railway line, all told eight blocks. The land has been cleverly chosen,

as the concern will have the facilities of two railroad lines. A large testing track will be established on the lots bordering the Grand Trunk system and this will enable people in the trains to see the cars being run on the testing track. The machine shop will be the largest of all buildings, measuring 700 feet in length and 70 feet in width. Two other shops will be 500 feet long and 70 feet wide, while a fourth structure will be 500 feet long but 10 feet narrower.

EXPRESS TRAINS TO MEET

Chicago, Ill., Sept. 14—Preparations are being made for the automobile race meet which is to be held September 30 and 31 at the Harlem race track. The program is now being made up and a few novelties in races are promised.

Today the racing committee of the Chicago Automobile Club, under whose auspices the meet will be conducted, received word from E. C. Noe, superintendent of the Chicago & Oak Park Elevated Railway, that he would put on twelve extra express trains each day. These will leave the loop downtown at about 5 minute intervals between 12 and 1 o'clock and returning will leave the track after the races. The round trip fare will be 25 cents. Mr. Noe also says that he will post announcements in all the stations of the running of these trains, so that the affair may be well advertised.

POOR FIELD IN SPAIN

Owing to the bad condition of the roads in Spain the demand for motor cycles and motor cars is not great and is confined to the large cities. The large majority of those now in use in that country are of French make. As they are of considerable cost, purchasers do not as a rule decide on any special make without serious consideration. Samples in the dealers' shops and carefully printed catalogs in the language of the country would, therefore, be useful in helping along the sale of American cars. From Cordoba, Spain, comes a report that there is a demand in that city for motor cars.

AFTER JERRY'S RECORD

Chicago, Ill., Sept. 14—J. E. Fry, manager of the Chicago branch of the Apperson Bros. Automobile Co., and Harold F. McCormick intend to make an attempt, Friday, September 16, at lowering the Chicago-Cleveland road record, now held by Jerome A. Ellis and Arthur G. Schmidt in 17 hours 5 minutes. Fry and McCormick will start at 2 a. m. from the Chicago Automobile Club.



INGILBERT ASCENDING VENTOUX HILL ON THE GRIFFON WHICH WON IN MOTOR BICYCLE CLASS

SYRACUSE HAS PARADE

Decorations of Automobiles Most Elaborate Ever Seen in the East—Rivalry for Prizes

Syracuse, N. Y., Sept. 12—The automobile parade here last Thursday night proved the biggest and most successful event of the kind ever held in this part of the state. The number of machines in line was 112, the majority of which were gaily decorated with flowers, flags, bunting and ribbons. The parade was gotten up by the Chamber of Commerce and the Automobile Club of Syracuse for the purpose of entertaining the visitors at the state fair, which was held here last week. Prize cups were offered for the best decorated cars in three classes. The winners were as follows: Class A, heavy touring cars, Anthony Will; class B, light touring cars, Willet L. Brown; class C, light runabouts, Mrs. Charles C. Truesdell. The streets were lined with great throngs from every town in the central part of the state, including a dozen mayors of surrounding cities. The line of march figured up about 8 miles, and 25,000 people crowded about the reviewing stand.

Much of the success of the parade is due to Carl L. Amos. With him rode the chief of police. The start was made from the armory at 8:30 o'clock. The tooting of horns was deafening. The paraders were full of life and everyone entered into the spirit of the event. After passing the reviewing stand the decorated cars which competed for prizes were brought back and judged. The judges were Douglass N. Green, acting for F. R. Hazard, president of the Chamber of Commerce; Gates Thalheimer, Donald Dey and Frederick B. Scott.

Mr. Will's car had a canopy like an umbrella, about which were draped wreaths of flowers and evergreens. Hanging from the canopy along the side were electric lights, with red, white and blue shades. In front was a large electric start. The machine of Willet L. Brown had a canopy made of white and yellow cloth. The box was neatly draped with colors, and in front was a large white star. Mr. Will's two closest competitors were Burns L. Smith and Herbert W. Smith. The former's car was a mass of flowers, ornamental grasses and rushes in the form of a flower basket, with a floral arch for a handle. A striking effect was gained by a large headlight mounted on a pole which sent its light into the basket. H. W. Smith's car represented a large Japanese summer house. It was decorated with flowers, wreaths and Japanese lanterns.

In the light touring car class there was also strong competition. The car of H. K. Brown was trimmed with pink chrysanthemums and holly leaves. The car of Alexander T. Brown had a large castor plant overshadowing the seat, and the vehicle was nearly hidden with yellow flowers and leaves. R. M. Cornwall had a car the most elaborately decorated with electricity of any in the parade. There was a shield of electric lights on top and wheels of electric lights were on the sides. These wheels revolved, producing a pleasing effect. Flags

were used to produce a color effect. One of the runabouts that attracted great attention was that of L. L. Whitman and C. S. Carris, which completed the trip from San Francisco to New York in less than 33 days. It was run by Mr. Whitman himself, who came up from New York to take part in the parade. An automobile which created considerable amusement was that run by Charles Brown, Stetson Barnes and Julian Barnes. It was fixed up with a hay rack covered with hay, and the drivers were dressed as farmers.

Dr. F. C. Walsh and F. C. Power had their cars decorated with goldenrod. Duane Millen had his car decorated with flags with pleasing effect. C. M. Ryan used flags, running them over the top like a canopy. Dr. Geo. R. Kinne decorated with flags, and E. H. Dann had flags arranged so as to look like a top let half way down and carried Japanese lanterns. Some of the out-of-town machines which attracted attention were those of George N. Pierce, A. S. Robinson, E. A. Wadsworth, A. V. Brower and B. T. Tibbetts of Utica and Carl Lager of Baldwinsville. Cars were in the parade from Binghamton and other cities in the central part of the state.

INSPECTION AUTOMOBILES

St. Paul, Sept. 10—Automobiles are being tried on the Great Northern railway system, running out of St. Paul on the Pacific coast lines, for inspection purposes. General Manager Ward of the Great Northern put an automobile into commission this week and has already made a number of inspection trips in it with very satisfactory results. The machine used by Manager Ward is a light touring car, equipped with flange wheels similar to those on Charles J. Glidden's big car, which is now touring west on the Canadian Pacific. The manager tried the car this week on several extensive runs, covering the line between Grand Forks, Crookston and other points where he had business.

In all of the trials the automobile proved highly satisfactory, in every way superior to the motor velocipede, and much more serviceable than a private car for the inspection work. The general manager's car was run on special orders, but was able to get under way at any time, without waiting for regular train service.

It is stated on good authority that the trials of the car by General Manager Ward were so satisfactory that the Great Northern has placed actual orders for a number of other machines, to be equipped with the flanged wheels. These will be put in commission by the various division superintendents and other officials whose duties require constant travel over the roadbed. The officials of the road state that they believe the automobiles will prove the best sort of inspection cars ever used on the road.

AUSTRIANS DISAPPOINTED

L'Auto, of Paris, published a telegram from Vienna, Austria, saying that much disappointment had been caused in Austrian automobile circles at the decision of Gray-Dinsmore to withdraw his 90-horsepower Mercedes from the Semmering hill-climbing contest, which is to take place near Vienna this month. The car will be sent to America to be driven in the Vanderbilt cup race. Dinsmore, it is claimed, will send his Austrian driver, Werner, to handle the car.

ONE SENSIBLE FARMER

Reads a Paper to Neighbors and Tells How To Handle Horses When Meeting Automobiles

Not long ago the country people around Greenville, O., discussed the relative merits of horses and automobiles, and the conversation turned upon the best means of educating the horse to become used to the motor car. E. Lawrence read the following interesting letter upon the subject: "Traveling by automobile is comparatively new, and on its introduction our legislature deemed it necessary to enact laws controlling their privileges on the highways as well as to define the action and duties of the drivers of carriages, buggies and other vehicles. In the enactment of these laws it is not so important to know what the driver of a horse or an automobile should do as to know what the horse will do.

"The horse becomes frightened because it does not know what the machine is. The holding up of the hand and the slow motion of the automobile will not divest the animal of his fright, but will increase his desire to run away; and to have the owner of the automobile forced to stop his machine in the presence of the horse and endeavor then to lead him by has a tendency to increase his fear of the machine. The horse is reasonably familiar with the voice of the man having him in charge, and if the horse has never passed an automobile, or having a horse that the owner or driver of same knows that he will become frightened and hard to manage, take no chances; take the horse by the bridle and carefully lead him to the automobile, giving the animal time to fully examine it, that he may feel that it will not hurt him; his fear will invariably subside. I speak from experience, and have known a horse to rub the machine with his nose and by its actions plainly show that he now believes the automobile is entirely harmless. The automobilist must not be impatient because a horse is led by a still machine without his giving it any notice. The horse will rub his nose against the machine while the engine is running and the car standing still, and both eyes of the horse thus educated, and he will not care any more for it than the rattle of a reaper, to which the horse can be hitched, and when the horse is once cured of its fright in this particular the driver will have no more trouble in this respect.

"If a horse does not scare until the automobile is close to him, then the faster the automobile goes to get out of the way the sooner is the danger over. As example, a horse attached to a buggy was going up hill, and when near the top of the rather steep hill along came an automobile in the opposite direction and at a high rate of speed. At first sight the horse wheeled to the right and then turned its head to see what frightened it, but the automobile was gone and the danger over. Had the horse seen the machine at its second look the buggy would have been demolished. The horse did not have time to become thoroughly frightened because the automobile passed by like a flash.

"The writer is of the positive opinion that



the only safe way for a frightened horse or a horse that never passed an automobile in the road is for the driver of the horse to take him by the bridle and lead him to the stilled machine first and then by degrees lead by when the machine is in motion and driven by, even if the horse has to be unhitched to accomplish this. Never allow an automobile to pass while holding a frightened horse. I do not believe in holding up the hand while in the vehicle. New drivers of automobiles may not see your hand, but will see you holding your horse by the bridle. No automobilist will pass a horse or scare a horse thus treated. Venturesome drivers of horses will sometimes attempt to drive a frightened horse past the automobile without giving notice or getting out of their vehicle. This is wrong, as it does not afford the frightened animal sufficient opportunity to become reconciled to the machine."

OLDFIELD AT IT AGAIN

Cleveland, O., Sept. 12—Barney Oldfield, looking hale and hearty as though he had never been mixed up in an automobile accident, returned to Cleveland Saturday after a 10-day touring trip through Kentucky, Tennessee, and Ohio. Oldfield shows no marks of the St. Louis accident except a cut lip and a wound

VANDERBILT ENTRIES IN France, Germany, Italy and United States Well Represented In the Big October Cup Race

New York, Sept. 12—Entries for the Vanderbilt cup race on Long Island on October 8 closed last Thursday morning. A telegram to MOTOR AGE last Wednesday, the day of its going to press, gave the names of twelve formally entered and mentioned three more as promised or expected. These three—the Packard Gray Wolf, the Smith & Mabley Simplex, and the Stevens Mercedes materialized. To them have been added six more, 2 each from the United States, France and Germany. They have been added six more, two each from seven from the United States, six from France, five from Germany and two from Italy.

The new entries are a 24-horsepower Pope-Toledo by the Pope Motor Car Co., a stock car, which H. H. Lyttle will drive; a specially built 75-horsepower Smith & Mabley Simplex, by Frank Crocker, which the owner will pilot; a 90-horsepower Renault, by W. Gould Brokaw, which its driver, M. G. Bernin, sailed last Saturday to get; a 60-horsepower Mer-

"We duly received your favor of the 24th and have not replied to same sooner, as we have been hoping against hope that we could see some way to make good our entries for the Vanderbilt cup race, but circumstances in the shape of the time being too short between the announcement of the rules and the time of the race will prevent us from making any entries for same this year. We are, however, very much interested in this event and shall at once go ahead on our cars and have them in shape to compete in 1905."

The White cars were the first nominations to be made, their entry following close on the announcement of the conditions of the race. William Wallace, though, was the first to promise an entry, which he has made good by the nomination of a Fiat. The good faith of the White company is proved by its early notice of withdrawal on the discovery that its entries could not face the starter.

SALTS FOR LAYING DUST

As a means of laying dust on race tracks and roads an English writer suggests an application of chemical salts. He claims that calcium chloride is practically a waste by-product of several manufacturing processes—for example, the extraction of copper from burnt pyrites, the ammonia soda process,

VANDERBILT CUP RACE ENTRIES

UNITED STATES

Entrant	Car	Driver
Pope Motor Car Co.	60-horsepower Pope-Toledo	A. C. Webb
Pope Motor Car Co.	24-horsepower Pope-Toledo	H. H. Lyttle
C. A. Duerr	40-horsepower Royal Tourist	Joe Tracy
Packard Motor Car Co.	30-horsepower Packard	Charles Schmidt
Frank Crocker	75-horsepower Simplex	Unknown
White S. M. Co.	White Steamer	R. T. White
White S. M. Co.	White Steamer	Webb Jay

ITALY

Entrant	Car	Driver
William Wallace	90-horsepower Fiat	Entrant
A. G. Vanderbilt	90-horsepower Fiat	Paul Sartori

FRANCE

Entrant	Car	Driver
M. Clement, Paris	80-horsepower Clement-Bayard	Albert Clement
W. G. Brokaw	90-horsepower Renault	M. G. Bernin
R. E. Jarrige	90-horsepower deDietrich	L. Regan
Panhard & Levassor	90-horsepower Panhard	G. Heath
Panhard & Levassor	90-horsepower Panhard	Teste
Panhard & Levassor	90-horsepower Panhard	Unknown

GERMANY

Entrant	Car	Driver
S. B. Stevens	60-horsepower Mercedes	Entrant
C. G. Dinsmore	60-horsepower Mercedes	Unknown
Isadore Wormser	60-horsepower Mercedes	Unknown
E. R. Thomas	60-horsepower Mercedes	E. E. Hawley
George Arents, Jr.	60-horsepower Mercedes	Carl Mensel

on the breast, which has not healed up thoroughly. The Peerless company is building Oldfield another new racer and in a week or so Barney says he will be in the game again and will race or give exhibitions wherever there is an opportunity of carrying off the cash. Owing largely to the fact that the Peerless company has not yet completed the new racer for Oldfield; also because of the fact that the finish of the baseball season will be held here during the last of the month, and it is thought there would be no show for other outdoor attractions, the Cleveland Automobile Club has abandoned its plan of holding another race meet this fall with a series of match races between Oldfield and Kiser, the star attractions.

COAST ENDURANCE RUN SURE

San Francisco, Cal., Sept. 6—On Wednesday, September 21, the California motorists who will take part in the first big endurance run in the west will start from this city on their 300-mile reliability trial run to Los Angeles. After the successful Del Monte meet the interest in this contest has doubled and the Automobile Club of California is working with renewed effort and energy in trying to make the long distance run a success in every manner.

cedes, by E. R. Thomas, the turf magnate, whose pilot will be E. E. Hawley, its driver at the Jersey coast carnival contests; a 90-horsepower de Dietrich, by R. E. Jarrige, which L. Regan, or possibly Gabriel, will pilot; and a 60-horsepower Mercedes, by Isadore Wormser, the banker, driver unknown.

It has been known for several days to a few in the confidence of the racing board chairman that Mr. Pardington had received a letter from Windsor T. White, stating that the White Sewing Machine Co. would be unable to finish the two White steamers in time for the race. Mr. Pardington thought best to refrain from giving the news out for the present, in the hope that it might be found that after all the two cars, which were entered in good faith and were in course of construction, might possibly be hurried through to completion in time for the contest. A notice received today from one authorized to speak for the company makes the fact public and leaves no hope that a White will be seen.

In a recent letter to Chairman Pardington, Windsor T. White says, in reply to an evident inquiry as to the progress being made with the cars:



and the manufacture of chlorate of potash. It is highly deliquescent and soluble in water. Strong solutions of this applied to the roads would keep them almost permanently damp, it is claimed. The further claim is made that this solution would be cheaper than oils and would be without their objectionable odor, and, being a neutral salt, would be harmless to motor car tires, etc. If this is true, magnesium chloride, slightly more expensive but still a cheap salt, ought to be quite as effective. It is also a by-product of certain manufacturing processes.

OUTLAW MEET AT MILWAUKEE

Milwaukee, Wis., Sept. 10—The automobile parade run yesterday afternoon was more interesting than the races held later in the afternoon at the fair grounds. The club deserves praise for having been able to interest so many owners, as there were more than fifty cars in line, of which half a dozen came from out of town. More than 9,000 people and about seventy-five automobiles were at the track. There were three automobile and two motor cycle events. The first race was a 5-mile contest which George Odenbrett won. The 10-mile free-for-all went to Fred Tome in 13 minutes 44½ seconds. The 2-mile motor cycle race was easily won by Frank Zirbos.

AUTOMOBILE INSURANCE—THE ENGLISH VIEW

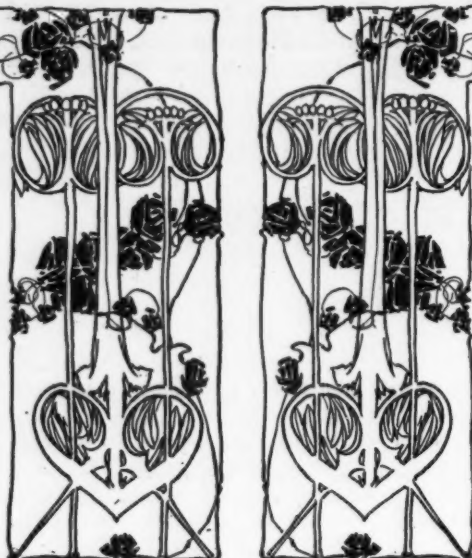
The ownership of a motor car carries with it undoubtedly much enjoyment, but also many serious responsibilities, and among the latter are certainly the risks of accidents and mischances. Such a risk is inseparable from so speedy a mode of locomotion, and this, together with the yet almost universal prejudice against railless mechanical traction—a prejudice which would practically disappear if the dust nuisance could be gotten rid of—has caused the majority of owners to recognize not only the desirability, but the necessity of protecting oneself by insurance. Protection can be secured against almost every risk a motorist runs.

The ordinary policy, which is usually limited to a car in use in the United Kingdom, does not protect the assured, except in the case of fire, in respect to the transit risk, whether by land or water, nor at all outside the limits of Great Britain and Ireland, but there should be no difficulty in securing the necessary protection quickly and cheaply.

The transit and marine transit risks are chiefly the risks of damage by accident or by fire while the car is being dispatched from one point to another, either by rail or steamboat or other means. These risks can be insured to cover the carriage of a car from any part of the United Kingdom to almost any part of the world, at the cost of but a few shillings per cent, usually from 5 to 10 shillings per cent on the full value of the car, provided it is properly packed or crated. The assured generally has to bear the first £5, up to £3 per cent of the value of the car, of every claim. The marine risk policy issued at Lloyds is usually "F.P.A.," that is "free of particular average," and only covers damage resulting from the burning, stranding, or sinking of the vessel the car is carried in, and excludes liability for an amount equal to £3 per cent of the full value of the car.

With reference to the touring risk, protection usually takes the form of extending the policy, ordinarily limited to the United Kingdom, to the countries desired for the period required. The additional charge made for from 1 week to 3 months is, approximately, an extra 15 to 50 per cent of the full year's premium paid for home insurance. The first £5 to £10 of any claim is as a rule excluded. This additional premium is, perhaps, somewhat heavy, but, owing to the inevitable lack of control on the part of an insurance company of the conditions when a claim arises, the expenses of settlement are enormous and the amount that has to be paid to the foreign claimant usually excessive. It is not easy to get cover for Spain, Russia, Turkey, and the Balkans, but otherwise protection should be obtainable upon request at any time, as there is no reason for any delay.

About the beginning of 1899 I was responsible for the first policy issued to motorists to cover a number of benefits under one contract at an inclusive premium. This departure proved acceptable, but, as with everything connected with the motor industry, the insurance of cars has made some big strides forward since then. Today the policy offered can truly be



called a "comprehensive" one, as under it a motorist can now protect himself against practically everything except breakdowns, maintenance charges, and wear and tear, and these will probably become insurable in the near future.

It may be of interest to put on record that the insurance office I was connected with from 1898 to 1902 was repeatedly and urgently invited by representative American and French motorists to undertake motor car insurance in their countries owing to the native insurance methods being so unsatisfactory, so that if, up to the present, we have not led in the manufacture, yet we have done so in the insurance of motor cars. This is consonant with the fact that England has all along—certainly for 250 years—been the insurance pioneer of the world.

I will now deal individually with the chief benefits usually offered under "comprehensive" policies, dividing them up under the two headings of necessary and optional insurances, as follows:

NECESSARY—Accidental damage to car; claims by the public for personal injury or damage to property; fire, explosion, or self-ignition; accidents to paid driver; examination of car.

OPTIONAL—Burglary and larceny; accidents to owner.

Accidental damage to a car is far and away the commonest cause of claims under policies, but in the aggregate the amount paid is about equal to that for claims by the public, although there are fewer claims, because individually they cost more to settle. It is usual to limit the indemnity granted to accidental damage sustained when the insured car is being driven or used. The qualifying word "accidental" excludes breakdowns, wear and tear, maintenance charges—in fact, everything not directly due to something accidental or fortuitous—that is, something outside the car and the owner, for the car must be "external" and "visible." For instance, damage due to and resulting from a side-slip would undoubtedly be covered; but in the case, say, of the breaking of the steering rod the policy would only cover probably damage through colliding with something in consequence of loss of control, and would exclude the damaged steering rod, because this would,

as a rule, break in consequence of latent or patent defect, defective workmanship, or wear and tear. I have recently had to deal with a claim for seized clutches, which caused the breaking of the sprocket wheel; but, although the amount was small, yet the principle involved was such a serious one that, despite any possible irritation and consequent "bad advertisement," I had no option but to deny entire liability, the accidental or fortuitous element being entirely absent. There was, therefore, no need to go into the cause of the seizing to determine whether it was due to incompetency on the part of the driver, defective workmanship, or wear and tear. It may also be mentioned that it is usual to always exclude the first 20 shillings of every damage, and also damage of any kind to rubber tires and lamps; the latter having become necessary in consequence of the invariable practice of placing the lamps in such a position that they will almost certainly be damaged during the course of the year. The reason for excluding the first 20 shillings is obvious, as without it the cost of insurance would be considerably increased in consequence of the number of trivial claims that would be made.

In the case of cars valued at not more than £250, I consider £100 is a fairly sufficient single accident limit to insure for, and for cars costing more than that amount, a single accident limit of at least £250. The annual premiums are as follows: Cars under 6 horsepower, single accident limit £100, premium £3 4s.; £250, premium £4 16s.; cars of 6 horsepower and over, single accident limit £100, premium £4; £250, premium £6. These premiums cover any number of accidents in the year.

Claims by the public do not require much explanation, because almost every motorist, either by personal experience or through the experience of his friends, is fully cognizant of not only the legitimate but of the trumped-up, fraudulent, or grossly exaggerated claims which are made for alleged personal injuries or damage to property whenever it is possible to implicate a motor car. I have had to deal with a very large number of such claims, and the more one feels indignant, and resists what is undoubtedly downright misrepresentation and wicked exaggeration, the more one has to pay for not permitting oneself to be quietly fleeced. It may, however, be information to many motorists to hear that there are solicitors in both England, Scotland and Ireland who will pay liberal fees for the mere name and address of anyone having a real or imaginary grievance against an owner of a motor car. With regard to such solicitors, I have come to the conclusion that the only profitable plan is to "hold the candle to the devil," and in order to prevent the issue of a writ, and the running up of costs, to pay blackmail as I did in a disgraceful case, the solicitor taking the sum of £12 10s., being divided up as to £10 10s. costs for one letter and an interview, and £2 for the client.

No motorist can afford to carry the claims by the public, or third party risk, himself only to be rid of the worry of possible litigation. The amount to be insured should be a considerable one, and never less than £250 for a

EDITOR'S NOTE—This article is by Frederick Thorpe, manager of a leading English insurance company, and is from the *Automobile Club Journal*, of London.

single accident, as this is not an infrequent amount to reach in connection with such claims. In fact, no motorist can consider himself really secure unless he has got rid of such a risk up to the sum of £1,000 for a single accident, although £250 to £500 will protect him in the great majority of accidents. In the light of my experience, I should personally not feel protected unless I had someone else to take the risk up to at least £500 for each single accident.

The annual premiums are as follows: Cars under 6-horsepower, single accident limit £250, premium £4 16s.; £500, premium £6 8s.; £1,000, premium £8; cars of 6-horsepower and over, single accident limit £250, premium, £6; £500, premium £8; £1,000, premium £10. These premiums cover any number of accidents in the year.

Fire, explosion and self-ignition are risks that are ever present, whether the car is in use or not, and the fire protection, as a rule, follows the car wherever it may be, protecting the owners at all times under all circumstances. Attention may be called to the fact that there would appear to be an inclination to under-insure a motor car against the fire risk, and which is not of so much importance to an insurance company as to a motor car owner, because when a fire occurs the car is usually totally destroyed or very nearly so, the salvage seldom being worth more than from £10 to £50. An owner should, therefore, insure against the fire, explosion and self-ignition for not less than three-fourths of the full value of his car. The rate of premium is 15 shillings per cent., so that the annual premium for a car worth £500 would be £3 15s.

The need to insure a paid driver against accidental injury is not so much a question of

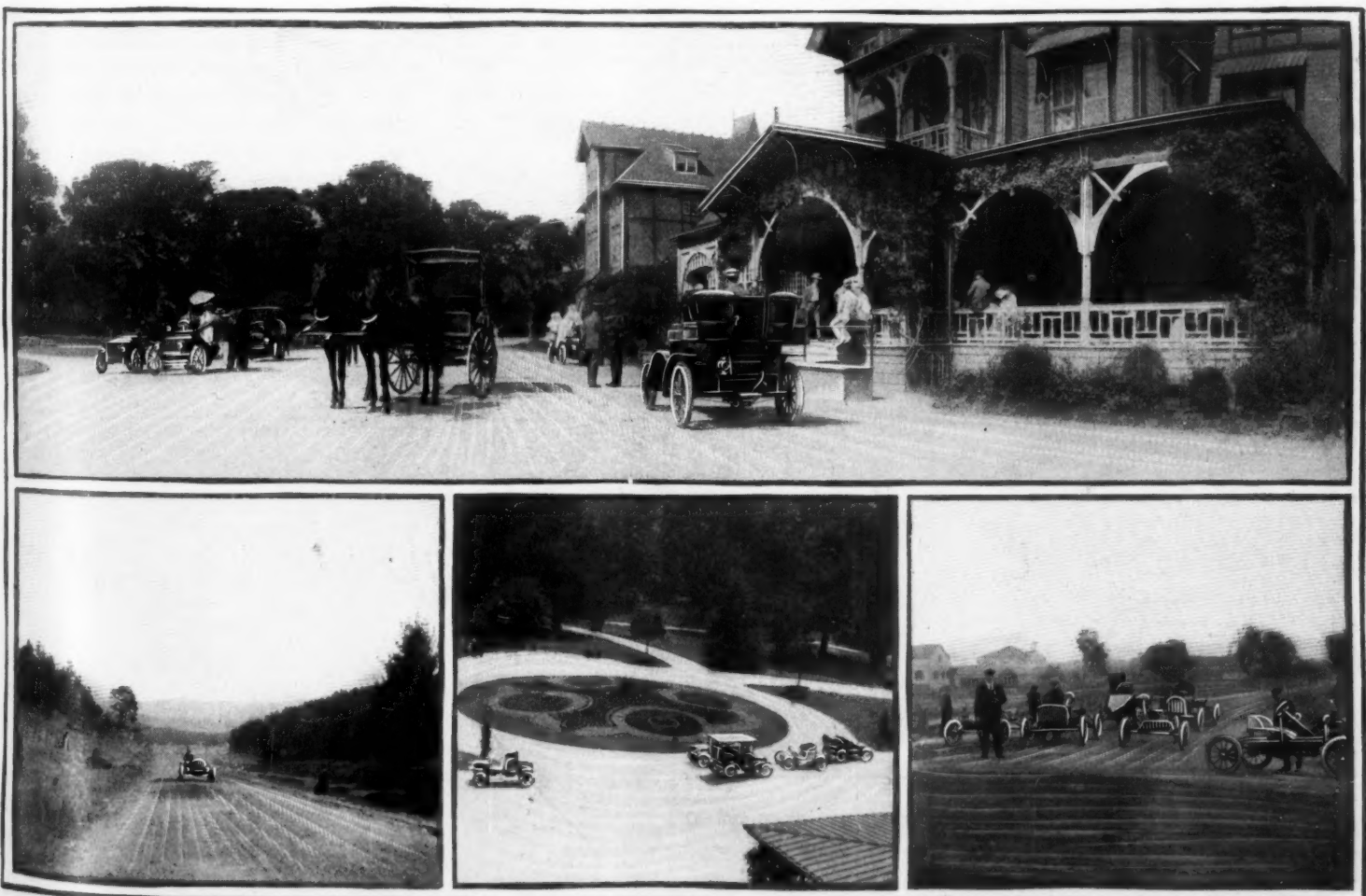
protecting the owner's legal liability, because probably little if any would exist in the majority of accidents which occur to chauffeurs; but, the owner would seldom refuse to pay weekly wages, or other compensation, to his driver when permanently or temporarily disabled by an accident which has happened in connection with his motor car. It is therefore a mere matter of business for an owner to protect himself in such a way that in the event of an accident happening he will be reimbursed the larger part of any amount he would consider himself morally, if not legally, bound to pay. The annual premium is 10 shillings to insure £1 per week for 26 weeks, with £50 for the loss of one limb or sight in one eye, and £100 in case of death or for the loss of two limbs or the sight in both eyes. The policy protection now covers accidents to drivers sustained while standing by or examining the car insured.

The greater number of the owners of motor cars are not skilled and qualified engineers, so that a yearly examination by an independent and expert motor car engineer is of such value that it may be described as a necessity, and there is little doubt that it will come to be regarded so in the course of the next year or two. The fact that one's chauffeur may be exceptionally capable and careful does not lessen the value of an independent engineer's report, whose sole duty it is to discover defects, whether actual or developing, and to report generally on the condition of the car. Periodical examination of boilers, gas and steam engines, and electrical machines, are now regarded as a necessity by the majority of the users of such machines, and not only by those who are ignorant of engineering matters, but by engineering firms

themselves, as the latter, with their skilled and technical knowledge, are able to appreciate the value of an independent opinion. How much more necessary is it, therefore, for such a delicate piece of mechanism as a motor car to be independently and periodically examined when the owner's sole protection is his driver? Under the "comprehensive" policies no charge is usually made for an examination, as the insurance company regards it of so much value for its own protection as to justify doing it for nothing.

With regard to insurance for burglary and accidents to owners it is not necessary to go into them in much detail, because the insurance of a motor car against burglary or larceny and the insurance of an owner against accidents happening in connection with the insured car are matters that will appeal to some and not to others, and there is every insurance facility for those who desire to be protected accordingly. The rate of premiums for burglary is 5 shillings per cent on the value of the car; but it should be noted that accessories are not covered unless the car is stolen as well. For personal accidents to owners the rates are: £1,500 for death; £500, loss of two limbs or sight in both eyes; £250 loss of one limb or sight in one eye, and £6 per week during temporary disablement, limited to 26 weeks, the annual premium being £1 5s. The policy which previously limited the cover to accidents happening when "driving or being driven in, mounting into or dismounting from the insured car," has now been extended, without extra premium, to cover accidental injuries sustained when standing by or examining the insured car, whether it is under cover or simply standing on a highway.

AUTOMOBILING AT DEL MONTE, CAL.—IN FRONT OF THE HOTEL



NEAR MONTEREY

FROM A WINDOW OF DEL MONTE HOTEL

CALIFORNIA SPEED CARS

STORIES OF TOURING



A BIT OF TYPICAL WISCONSIN LAKE REGION HIGHWAY

BUFFALONIANS TOURING

Touring is the popular form of diversion for Buffalo motorists at present. Early in the summer President W. H. Hotchkiss of the Automobile Club of Buffalo set the ball rolling by taking a trip through New York state, New England and the Berkshire hills. Jesse B. Eccleston, chairman of the runs committee of the club, started last week to outdo Mr. Hotchkiss. Accompanied by Mrs. Eccleston, who is herself an expert driver, and Mr. and Mrs. Broadwell of Detroit, Mr. Eccleston started to Albany, New York, Providence, Boston and Portland. Mr. Hotchkiss made about 1,500 miles and came home a more enthusiastic motorist than ever. Mr. Eccleston expects to make at least 2,000 miles. He is driving a Packard 24-horsepower car. The beauties of the Berkshires were so vividly recounted by previous travelers that the Eccleston party will come back that way.

LONG TRIP, NO TROUBLES

Mr. and Mrs. F. D. Abott, of Chicago, among the many automobilists for pleasure rather than for sport, have journeyed several times into the country, but recount a recent 3-weeks' tour in the lake region of northern Illinois and southern Wisconsin in a 12-horsepower single cylinder St. Louis touring car as one of the most enjoyable of all their experience both in automobilizing and in summer vacations. Mr. Abbott's story of this trip in his own words follows: "We left Chicago of a morning over the famous Sheridan road,

bound for Milwaukee, with the further objective points of Waukesha and Oconomowoc. We ran into Racine for supper, and the next morning had a delightful trip into Milwaukee. Automobilists entering Milwaukee from the south can find a macadamized road by striking a little further west than Kinikinick avenue, and it will pay to make the detour. Milwaukee has some good garages, and the citizens are becoming more and more interested in automobiles. It is hard for Milwaukee to give up the horse, but horse or no horse the automobile is growing in popularity in the Cream city, as everywhere else.

"The roads westward from Milwaukee to Pewaukee, Waukesha, Oconomowoc, and on through to Madison, Delavan and Lake Geneva are excellent—even the mud roads are away ahead of the mud and dirt roads in many other western states. The lake country of southern Wisconsin and northern Illinois seems to be a neglected route. A run of 300 to 400 miles by way of Milwaukee, Waukesha and Oconomowoc, Delevan, Lake Geneva, Lake Beulah, Phantom lake, Fox lake and the numerous other minor lake resorts and camping grounds up that way would be an ideal tour for Chicago automobilists. They would pass through a variety of country scenery. True the country is not very level, but there are no more hills than sufficient to add zest and give variety to country travel.

"In all my experience in country travel I have found the farmers generally pleasant and

accommodating. The stories about the animosity of the farmer, particularly towards the automobilist, seem to me largely mythical. The cranks, who are to be found everywhere, are exceptions to this, like to all other rules. Next to good roads—and the country people are becoming more and more alive to the necessity and benefit of having these improvements—I would say that what travelers through the country would most appreciate would be guide boards; and the country through which I have just traveled is in this respect sadly deficient. If the automobile associations, clubs, etc., succeed in securing anything in the way of guideboards and danger signals they will bring a blessing to not only automobilists but to all classes of travelers on the public highways.

"There is a wonderful interest taken in automobilists everywhere and I should suppose that agencies established in the smaller cities would get a good deal of business. I observed a good deal of inquiry about the securing of automobiles for livery use around the lake country. Some of the livery men seemed to be considering the proposition of placing automobiles in their stables for renting, believing such investment would prove profitable.

"I consider this trip a remarkable one in that we traveled about 600 miles and in the entire distance did not have a mishap; not even a single tire trouble. The tires on my carriage are Diamonds and they went through all kinds of roads, mud, clay, stony hills, sand and all the kinds that cause knockouts."

TOURING IN HAWAII

Mr. and Mrs. G. A. Turner, of San Francisco, Cal., recently returned from a trip to Honolulu, Hawaii Islands. They are the first automobilists who have taken an automobile with them to the islands for touring purpose. During 3 weeks they toured in their Rambler car among the coconut groves and banyan trees. "It is true we were the first to take a pleasure car to the islands," said Mr. Turner, "but don't think for a moment we will be the last. It will surely become quite a fad within another year for people to take their cars with them when they go to the islands for a visit of some length of time. Besides, one can easily save money by bringing one's automobile, as traveling expenses are high in Hawaii. There are many fine roads to all parts of the island leading out of Honolulu, and the plantation owners are taking it upon them-



A STOP FOR LUNCHEON AT LAKE PEWAUKEE



AFTER A DINNER AT A WISCONSIN FARM HOUSE

selves to improve the highways. It is beyond me to describe some of the beautiful drives which it is possible for one to take in in an automobile. Not only is the roadway smooth, but the foliage and immense trees overhead cast a shade which combines to give one an ideal highway. The people are very anxious that machines be introduced in the islands and are taking steps to grade portions of the roads that are uneven. When we left a movement was on foot to grade the way leading from Hilo, on Hawaii island, to Kilauea, the largest active volcano in the world. When this is finished, and it is promised that it will be by next year, it will present a most interesting trip for the automobilist."

AN EASY-GOING GOOD TIME

After a tour which lasted 3 weeks, during which time more than 1,500 miles were covered, Mr. and Mrs. L. A. Caspar, of Council Bluffs, Ia., returned home last week. During many days of the long trip, the tourists encountered bad weather and bad roads. They traveled among the lake resorts in Minnesota and never made great daily trips, sometimes only running 50 to 75 miles in a day.

THROUGH EUROPE IN A PEERLESS

Probably one of the first American automobiles with side entrance to be seen in Europe was the Peerless car which J. C. McCoy, of Perth Amboy, N. J., took to Europe and in which he traveled more than 5,000 miles through France, Belgium, Germany, Austria, Italy, Switzerland and England. Mr.

McCoy said the car was highly commented upon by many European automobile manufacturers who were interested in seeing the American made machine. The only tire troubles he had during the long journey was the blowing out of a casing of one of the Goodrich tires. This happened while in Switzerland. Mrs. McCoy, two sons and a daughter accompanied him on the European tour.

THROUGH NEW ENGLAND

Weyland E. Stearns and his family, of Newark, N. J., recently returned from a 3,000-mile tour made in a Ford car. The party toured in Connecticut, Vermont, Massachusetts, New Hampshire and somewhat in Maine and Canada. According to Stearns the roads were in fine condition and there was little trouble in finding automobile stations along the route. No trouble was experienced with the car, but a few punctures caused delay repeatedly.

BAD NORTHWESTERN ROADS

A runabout pulled into Minneapolis last Thursday morning after a run from Chicago which was a severe trial. Adolph Dahmke and Louis Barry drove the car and put in a 6-days' battle with mud, rain and hills. The two Chicagoans left their own city the week before and for a short distance out their journey was over good roads. Then they encountered mud and had to leave the main traveled roads and take to the backwoods districts. At Madison they ran into rain and from there to Minneapolis were wet most of the time. At La Crosse they were com-

pelled to lay over for a day on account of rain. In many places the mud was hub deep. Several times they were compelled to stop and dig the mud out of the wheels and scrape it off the body of the car to lighten the load. While coming through northern Wisconsin they struck one road where the machine started to skid on a side hill. It went to the edge of a 100-foot precipice and there fortunately brought up against a big stone, which saved the two motorists to tell the story.

No trouble was experienced until near the end at Minneapolis; when the strain of the pull through mud broke a chain near La Crosse.

HUNDRED MILES A DAY

Seven thousand miles in an automobile in 65 days, or more than 100 miles of traveling every day during that length of time, is the record which belongs to a party of motorists from Omaha, Neb., consisting of Mr. and Mrs. C. E. Wilkins, Louis R. Bostwick and B. C. Russell, and the Winton touring car in which they traveled. They started from Omaha June 28, went to Portland, Me., passing through Chicago, Buffalo, New York and less important cities and went back over a different route, taking in Philadelphia, Washington, the state of Virginia, then west over the Alleghany mountains, through Ohio, Indiana, Illinois and Missouri. In going directly to Portland and returning the journey would not make 7,000 miles, but the motorists made many side trips, one of which was over the route followed by Paul Revere in his famous ride.

MATTERS OF LEGAL INTEREST

Looking for Trouble Early—An automobile ordinance has been passed by the city fathers of Covington, Ind., providing that automobiles shall not be driven at a greater speed than 8 miles an hour in the streets of the town. There is one automobile in the town.

Any Car Good Enough in Madison—An ordinance was passed recently in Madison, Wis., providing that in the business district of the town the maximum speed at which automobiles may be driven, is to be 6 miles an hour. In other parts of the locality, 10 miles an hour is permitted.

Plenty of Nerve—A new automobile ordinance is to be introduced in the city council of Denver, Col., providing a minimum license fee for runabouts and other small motor cars, no fee for electric vehicles, but a tax of from \$500 to \$1,000 on large touring cars, which will be figured according to the cost and horsepower of the car.

Horse a Nuisance Sometimes—An interesting case came before a jury in Denver recently. E. F. Burden had brought suit against George W. Wood, claiming the latter in his automobile had caused the runaway of his team. He wanted \$400 and was allowed \$175. The instructions given to the jury by Judge Ben B. Lindsey, contained the following interesting passage: "High speed in automobile driving is not regarded as a matter of civil law, and becomes such only when, from the circumstances of the cases, it appears by a preponderance of evidence that the person operating the automobile did not use that degree of care which a person of ordinary prudence would have used in a like case. Horses are often frightened by locomotives and similar vehicles in both town and country, but it would be as reason-



able to treat a horse as a public nuisance on account of his tendency to shy and be frightened by unaccustomed objects as to declare an automobile a public nuisance from its tendency to frighten horses."

Fight in Sight—An automobile ordinance is now being prepared by the street and sewer department of Wilmington, Del., allowing 8 miles an hour and bringing forth protests from automobile owners and dealers. The latter also complain of the proposed numbering of the cars and the obligation of having two brakes.

What a Noise There Would Be—Alderman Rice, of the Chicago Council, has prepared an ordinance requiring automobiles to be equipped with an automatic whistle, which is to indicate the speed at which an automobile is being driven. The whistle is to be noiseless until a speed of 10 miles an hour is attained, then it will sound.

License in Toledo—All owners of vehicles, including automobiles, must have licenses in accordance with an ordinance passed recently by the city council of Toledo, Ohio. A license fee of \$2 for 6 months is being charged and thus far nearly 200 owners of cars have complied with the requirements of the ordinance. There are about 300 automobiles in the city.

Up Against It—The local authorities of Kansas City, Mo., are endeavoring to find some means by which automobile owners can be forced to take out licenses. Last year seventy-four licenses were issued, while since the first day of January, 1904, only forty-

three licenses have been taken out. According to the officials of the city there are more than 200 automobiles owned by people living in the city.

County Hill Climbing—The motorists of Fayette county, Pennsylvania, will hold a hill-climbing contest at Uniontown September 24. There are about forty users of automobiles in the county. One hill-climbing contest has already been held at Uniontown, in which Philip Moore of Dawson, Pa., won in a White touring car. The Uniontown hill is 6 miles long and has a grade of 15 feet to the mile. The coming race will be preliminary to a big track meet in October.

Pontiac Joins the Octoroons—An automobile ordinance was passed by the councilmen of Pontiac, Ill., providing that motor cars must not be driven at a greater rate of speed than 8 miles an hour within the town, and of 6 miles an hour at street corners. At first it was the intention of the councilmen to allow a maximum speed of 10 miles an hour, but this was cut to 8 miles after the protest from one of the city fathers. A fine of \$10 to \$100 will be given to the violator, who is also liable to imprisonment in jail.

Suit a Reward—William Caldwell, of Portage, O., has drawn a suit for damages for alleged mismanagement of his new automobile. Samuel Warden, the plaintiff, says Caldwell in running his automobile about the streets of that town scared his horse, with the result that the animal ran away and smashed the buggy, also inflicting injuries on itself so that it is worthless. Portage has an ordinance limiting the speed of automobiles and the plaintiff claims that Caldwell was running his machine above the speed limit.

AFFAIRS OF THE CLUBS



NEW HOME OF THE PITTSBURGH AUTOMOBILE CLUB

For Both Sexes—The Houston Automobile Club was organized in Houston, Tex., September 10. Dr. W. R. Eckhart was named temporary chairman and Miss Jennie Bering temporary secretary.

Club at Salt Lake City—H. A. Cummings and others from Salt Lake City, Utah, intend to organize an automobile club. Owners and persons connected with the trade are to be eligible as members.

In for Good Roads—At a meeting of the directors of the Chicago Automobile Club, held September 8, twenty new members were admitted, and it was voted that the club should join the National Good Roads Association.

Want To Use the Park—At a recent meeting of the Springfield Automobile Club of Springfield, Ill., the members present voted unanimously that a petition should be started in order to induce the members of the park board to repeal the rules passed recently which forbid cars in the park after 6 o'clock at night. Should the park officials refuse to consider the petition, then the case will be taken into court.

To Assist the Police—The number of automobile accidents which have occurred in Pittsburgh this summer have led the Automobile Club of Pittsburgh to take most strenuous measures not only to punish present offenders but to prevent such accidents in the future. Recently the board of governors offered a reward of \$50 for the apprehension of the party who ran into a carriage in Schenley park, injuring a child seriously. The board also passed resolutions commending the attitude of Superintendent of Police Wallace in enforcing the vehicle light ordinance and agreeing to recommend affiliation with the American Automobile Association.

Plan Smoky City Races—The Automobile Club of Pittsburgh is making arrangements for the biggest race of the year at the new track on Brunot's island on September 23 and 24. There will be five classes entered in the race. One of these will be open to all automobile manufacturers and another to professional drivers. The classes will be rated according to the weight of machines. Many of the prominent automobile firms have already signified their intention of getting in the big track meet, and some well known professional drivers have been invited. The island track is becoming more popular with every meet, and the coming event promises to draw by far the largest crowd of the year. to draw by far the largest crowd. The club

tried to hold a race meet on Brunot's island last year but called it off on account of not being able to secure good boat service.

Pittsburg Beats St. Louis—The Automobile Club of Pittsburg, Pa., numbers 217 members, while the St. Louis Automobile Club of St. Louis, Mo., has 138 members.

Laudable Objects—The Automobile Association of Bengal, India, was recently formed. A few weeks previous the Automobile Association of Bombay was formed. In the announcement concerning the formation of the organization, the Bombay officials say the object is to encourage and develop the motor and other industries connected with it in India, to organize exhibitions, competitions and excursions, to give information and advice about all matters connected with the automobile industry, to support and defend the members of the organization.

Scheme Can't Go—There is talk about establishing an automobile speedway on the lake front between Twenty-ninth and Fiftieth street, in Chicago. Frank X. Mudd, of the Chicago Automobile Club, has written to President Farson concerning the matter and stated that he had seen a number of residents living within the territory of the proposed drive and that are in favor of the scheme. The Chicago Automobile Club will petition the city and park officials for the permission of making the speedway, but private interests and the Illinois Central railroad people so control the ground that the scheme must fall flat.

Visit Peach Country—The Chicago Automobile Club once upon a time entertained in great fashion the Grand Rapids Automobile Club, and last Saturday about thirty car-loads of Chicagoans were treated to Wolverine hospitality in return. The visit was a composite affair, including a lake excursion, a country run in Michigan, track racing and Grand Rapids entertainment. By a special arrangement all of the cars in the party were taken on board the beautiful lake Michigan floating palace of the Holland line Friday night, occupants included, only the gasoline having to be left on the docks. When the party reached Holland in the morning they were met by a reception committee from the Grand Rapids club, headed by Secretary Welch, and which would have been glad to have escorted it to Grand Rapids but for the fact that several members of the Chicago Club thought they would rather be ahead of than behind the dust on the run over the fairly good 30-mile stretch of road between the lake and the furniture town. At Grandville the visitors were met by President Schurtz, of the Grand Rapids Club, and Mayor Sweet. The party was excellently cared for at the Morton hotel. In the afternoon a series of races were run on the fair grounds track. In these races J. C. Bronson, of Grand Rapids, Autocar, won the 1-mile race for runabouts; J. E. Thomas, of Grand Rapids, Rambler, 3-mile race for light cars; O. E. Schell, of Grand Rapids, Michigan, 2-mile race for light touring cars; John E. Fry, of Chicago, Apperson, the 5-mile race for touring cars; while Sidney S. Gorham, of Chicago, Winton, with an allowance of 1½ minutes was supposed to have won the 10-mile handicap, although the scorers were somewhat doubtful concerning the number of laps run by the different contestants. In the evening the members of both clubs went to the Lakeside Club,

where a banquet was tendered the visitors. They accepted heartily. Sunday the Chicagoans returned leisurely and otherwise to Holland, taking the Sunday-night boat back to Chicago.

Brought Members—One of the most noticeable results of the interest taken in the recent Del Monte race meet is the increased number of applications for membership in the Automobile Club of California. The organization is, above all, a good roads club and spends little time with social affairs.

Club at Wilmington, Del.—Owners of motor cars and their friends gathered at a special meeting held in Wilmington, Del., last week and decided to form an automobile club. A committee on membership, one on organization and an executive committee were named, but no officers were selected nor was a name for the organization. About thirty enthusiasts who were present promised to become members.

Two Days' Run—Twelve cars containing members of the Cleveland Automobile Club made the run to Cambridge Springs, Pa., and return on Saturday and Sunday. The trip to the Pennsylvania watering place had been postponed from last week on account of rain. Officially the start was made Saturday morning at 6 o'clock, but only a few appeared at that early hour. The others straggled out of town at all hours up into the afternoon. The early starters reached the Springs in time for 6 o'clock dinner. The majority of the members returned to Cleveland Sunday, although a few remained over Sunday and returned Monday.

Opened New Home—The event of the year in Pittsburgh automobile circles was the dedication of the new home of the Automobile Club of Pittsburgh. The club governors issued invitations to all known users of automobiles and over 100 enthusiasts attended. The gathering assembled at 8 o'clock. Many prominent motorists from out of the city were in attendance and were loud in their praises of the tasty and costly decorations and the splendid music provided. The new building is located at the corner of Baum and Beatty streets, east end, in the heart of the automobile district. The largest stores and garages in the city are located within a square of the building, and all the leading boulevards are within easy distance. The building, which is a two-story stone and frame structure, cost \$12,000 and \$2,500 more was spent for elegant furnishings. The first floor contains pool, billiard and bowling rooms and a good-sized garage. On the second floor is a handsome grill and lounging room. There are also assembly committee rooms, ladies' parlors, serving rooms, lockers and retiring rooms. No expense was spared to make the new home of the club a model of convenience and comfort for the members and their friends. It is expected that the new quarters will greatly stimulate interest in automobile events and some important meets are being planned now. The Automobile Club of Pittsburgh now has 250 members and twenty-five applications were received Monday evening. The beautifying of the new building was left to a house committee in charge of Dr. John A. Hawkins. The officers of the club recently elected are: President, W. C. Temple; first vice-president, James Francis Burke; second vice-president, W. H. Nimick; third vice-president, Edward Kneeland; treasurer, Reuben Miller, Jr.; secretary, W. Linford Smith.

CURRENT GOSSIP OF THE GARAGES

Gone to Ireland—Peter Fogarty, New York agent for the Northern, sailed on Friday for Ireland. His trip will be a flyer of about a month's duration.

Two Good Lines—The agency for the Cadillac and Haynes-Apperson cars in Lima, O., has been secured by Henry A. Mack, who is located at 125 East Market street.

New Ford Agencies—The following new agencies for the Ford cars have been secured: Riverside Music Co., in Riverside, Cal.; Foreman Brothers, at Paducah, Ky.; H. A. Babcock, at Waterbury, S. D.

Fords in Boston—P. A. Williams, Jr., general manager of the agency for the Ford cars in Boston, Mass., has leased a building at 147 Columbus avenue, which will be fixed up as a store, store house and repair shop.

Will Move Temporarily—Horace B. Day of New York will move his Queen agency temporarily to 220 West Twenty-sixth street, pending the completion of the alterations of 17 Park place for the Willis Automobile Exchange, which will be Mr. Day's headquarters within a fortnight.

Kull in St. Louis—A. L. Kull, proprietor of the Ford Automobile Station in Washington, D. C., is in St. Louis on a business and pleasure trip. During the past week he entertained Henry Ford of the Ford Motor Co., who came to Washington to see the new Ford racer in action on the Bennings track. Mr. Ford is now in New York.

Big Garage Promised—Announcement is made that the largest garage in central New York will be opened in Syracuse during the coming winter by Carl L. Amos and Harry L. Pierce. They will have the agency for the Pope-Toledo and other important makes. The season for the sale of machines is nearly over and those in the business are trying to look into the future and see what next year will bring forth. There is no doubt that every year will continue to be better than the preceding one, and from the inquiries that have been made and the statements of people who have become interested in the game it is evident that there will be a large sale of machines next year. It is also probable that the larger touring cars will be the proper thing and will be bought by all who can afford them.

Prognosticating at Buffalo—With the end of the retail season automobile dealers of Buffalo, N. Y., are devoting some of their leisure to speculation as to the changes which may take place before the opening of the 1905 trade spell. Among some who pretend to know the inwardness of the trade conditions there it is argued that there are too many retail stores and that some will drop out before 1905. The opposite view is that Buffalo's enthusiasm over motoring is on the increase, that the demand for cars will be greater next year than this, and that if anything there will be more retail stores in the city next season than there were this year. Minor changes at least are inevitable. Stephen L. Stone, formerly a member of the Buffalo Motor Car Co., has left that concern and is now with the Centaur Motor Co. The Buffalo Motor Car Co. is being continued by William Mount, one of the original firm members. One argument which will be used to justify the increase of the firms in Buffalo will be that conditions of the trade itself

will be better next year than they were this. It is admitted generally that slow deliveries hampered local retail dealers in many cases this year.

Out for Himself—John H. Zuber, of Reading, Pa., formerly connected with the King Machine Co., has severed his connections with the concern and will shortly open an automobile store in the Pennsylvania town.

Change in Representatives—A change in the representatives of the National Motor Vehicle Co. has been made, C. H. Tyler now being the representative of the company in the eastern and New England states. Mr. Tyler's change of the territory has resulted in an increase in business in that section. A decided revival of electrical sales in the larger cities is reported. The company is now prepared to furnish Edison, Exide or Western batteries and the new divided battery model is attracting considerable attention. A change has also been made in the representative at the world's fair, Henry J. Hicks, who has been in charge of the exhibit since the beginning of the fair, is to resume his road duties and the assistant sales manager, George M. Dickson, will be in charge of the exhibit for a few weeks, assisted by Albert Fehling, the Buenos Ayres representative.

Novel Testing Scheme—The Keystone Automobile Co., of Pittsburg, Pa., has recently enlarged its testing plant in its big garage in the east end. The company has 250 lights on a board, which will test any machine up to 10 horsepower. Heavier machines are tested by getting the voltage up to 110 volts and then raising the resistance by throwing on one row at a time, there being ten rows on the board. For extra heavy machines a half barrel of water is set near the tester and a short circuit is made by putting two positive elements on one side and one element on the other. Better satisfaction is given by jacking up the rear wheels of the automobile and connecting it with the tester by a belt and pulley, thus giving a steady heavy load, than by testing it on the road. The company represents the Electric Storage Co. of Pennsylvania and is having excellent success in placing Exide batteries. A large Exide battery plant is one of the conveniences of the company garage. Twelve machines may be charged at once. The electric machines are gaining steadily in Pittsburg. This company alone has sold thirty this year.

Welcome, Garden—Another of the real old-timers of the bicycle game has become a factor in automobile trade. R. D. Garden, better known as Bob, who for over 20 years was one of the standard bearers of cycling, has deserted the thinned-out ranks. This has come about through the recent closing of the Philadelphia branch of the Pope Mfg. Co., of which Garden has been manager for years. He has not deserted Philadelphia, however, and is now manager of the Quaker City Automobile Co., one of the largest retail concerns



in the east and proprietor of one of the finest stations in the country. The company is agent for the Pope-Toledo, White, Franklin and a Detroit-made runabout.

Felker to Have New Home—The Felker Cycle Co., 1533 Tremont street, Denver, Col., recently purchased property for \$27,000, upon which it is said an automobile garage and repair shop will be erected.

Early Deliveries—The first shipment of 1905 White steamers is expected in San Francisco, Cal., before the end of this month, according to C. A. Hawkins, general manager of the White Sewing Machine Co. in the Pacific coast metropolis, who said that twenty-four of the new cars have been sold.

Big Tire Repair Shop—The Williams Rubber Co. of Los Angeles, Cal., has been reorganized and has become the Harrison-Williams Rubber Co. The concern has a paid-up capital of \$25,000. H. O. Harrison is president, T. J. Williams vice president and W. G. Williams secretary-treasurer. The company is one of the largest of the kind in the country, occupying a building having a floor space of 12,000 square feet at 116-118 East Ninth street. It sells the Dunlop, Diamond, Fisk, Goodrich and G & J tires throughout southern California and Arizona. Molds for every kind and size tire handled are kept on the premises. A complete tire repair shop has been fixed up.

Has Great Hopes for 1905—W. H. Bissell, who conducts a large garage at Syracuse, N. Y., summed up the season thus to a MOTOR AGE representative: "The increase in the number of machines sold in Syracuse over last year is large. While the season is nearly over some sales are still being made, mostly of second-hand cars and at bargain prices. From inquiries I have made I conclude that next season a large number of high power cars will be sold here. The tendency seems to be toward large machines. I wouldn't be surprised, either, to see some delivery wagons and trucks. One delivery wagon was sold here this year and is on the streets every day. Automobilists are great advertisers, and they keep themselves constantly before the public. This is a good thing for the dealers and everything in the way of shows, parades, etc., helps us. I expect a lot of business from tourists who come to the state fair."

Trade Opening Early—"Trade for the coming spring has already opened up," said Burton O. Gamble, manager of the Toledo Motor Car Co. of Toledo, O., to a representative for MOTOR AGE a few days ago. "I look for big trade from now on until the first of the year. The demand is for large machines. Owners of small machines are rapidly disposing of this grade of road property and are placing orders for machines of three and four cylinders and 30 and 40 horsepower. People in former years have been sadly fooled in not getting their machines as soon as desired, which of course was the result of their having placed their orders so late in the season and manufacturers being rushed beyond their capacity with orders, so now there is a strong disposition already to get in orders early so machines may be out for early delivery in the spring. There will be a great many machines sold in surrounding country towns. Even farmers are beginning to buy automobiles."



DETERMINING HORSE POWER

Mahukona, Hawaii—Editor MOTOR AGE—What horsepower will a $3\frac{1}{4}$ by $4\frac{1}{4}$ -inch gasoline motor develop at a speed of 1,200 revolutions per minute and how is the resulting answer reached?—E. A. FRASER.

The horsepower formula for a gasoline motor is quite a conjecture unless an indicator card be taken or a dynamometer test be made. A commonly accepted formula is

$$H. P. = \frac{D^2 L N}{B}$$

Where D is the diameter of the cylinder in inches; L, the stroke in inches; N, the revolutions per minute; and B, a factor varying with the compression and the excellence of the design. Generally it is quite safe to assume a value of B equal to 15,250. In that case the formula would adapt itself to the case in question as follows:

$$H. P. = \frac{(3\frac{1}{4})^2 (4\frac{1}{4}) (1200)}{15,250} = 3.53$$

San Francisco, Cal.—Editor MOTOR AGE—Will you tell me through the Readers' Clearing House what should be the horsepower of a two-cylinder upright motor of 4-inch bore and stroke, running at from 150 to 600 revolutions per minute? The pistons travel together. Can a Gould carburetor be used successfully on such a motor?—PAOLO DE VECCHI.

A double-cylinder, 4 by 4-inch motor at 600 revolutions per minute should develop a little over $5\frac{1}{2}$ horsepower. MOTOR AGE sees no reason why this motor can not double its speed, increasing the horsepower, if the motor parts are of correct size. The carburetor referred to should prove satisfactory.

MECHANICAL INLET VALVES

Devils Lake, N. Dak.—Editor MOTOR AGE—Will you kindly give through the columns of MOTOR AGE your opinion of the advantages and disadvantages of the mechanical inlet valve as used by some of the leading manufacturers? Also, what would be the power of a four-cycle, single-cylinder, horizontal motor, of $4\frac{1}{4}$ -inch bore by 6-inch stroke, running at 900 and 1,200 revolutions per minute? Would such an engine have power enough to run a 1,100-pound convertible runabout or light tonneau?—HARLAN R. FANCHER.

The objective point in motor design is to get the maximum power from the cylinder used with the least weight and smallest bulk, manufacturing expense being considered secondly. To attain these ends and to also have ample strength, it is necessary to have the largest volume of gas possible and to compress it into the smallest volume consistent with good practice, so as to get the highest initial

pressure and therefore the greatest mean effective pressure. Assuming that the inlet valve spring is such that it requires 1 pound per square inch to lift it, there is represented a vacuum of 2 1-30 inches of mercury, which in general is equivalent to 3 per cent of the stroke of the motor, which of course is lost. Depending upon vacuum to hold it open, the valve cannot do otherwise than throttle the charge, while the mechanical valve set to open at the proper time cannot throttle if designed properly. With the latter the cylinder is filled entirely, thus giving increased compression and mean effective pressure, greater certainty of operation and more power.

A $4\frac{1}{4}$ by 6-inch motor running at 900 revolutions per minute will develop $6\frac{1}{2}$ horsepower, which will be ample for a machine weighing 1,100 pounds if too much hard work is not expected of it.

ELECTRICAL PROBLEMS

Anderson, Ind.—Editor MOTOR AGE—We are frequently advised by the trade paper of the advantages of keeping fully posted on the many and various details that go together to make up the general progress of the automobile industry. The writer does not want to be understood as questioning this advice while calling attention to some slight features falling somewhat short of absolute perfection, whereby the writer is reminded of Josh Billings' remark that "It is better to not know so many things than to know so many things that ain't so." The incentive of this communication is three statements of pseudo-scientific nature regarding electrical matters in the Readers' Clearing House in your issue of August 11. In the first C. P. D. is told unequivocally that the negative battery wire is the one to ground; while, as a matter of fact, it does not make any difference in practice which way the battery current is sent through the primary circuit. There is, of course, the lessening of the chance of error and the saving of mental work by always connecting one way, but such psychological problems are not to the point, as it would evidently answer as well to ground the positive as the negative. Physicists differentiate nicely between the character of a high tension discharge at negative and positive terminals, but there are three reasons why this cannot be the reason for such an answer. The first is the nature of the jump spark, as the secondary discharge of a jump spark coil is more like an arc than a high tension discharge and it is the bringing of a column of gas to a high temperature by the passage of the current, rather than the streamer or brush discharge from any terminal, that ignites the mixture. Then, if one end of the stream of hot gas we call the spark were different from

the other and therefore better suited to one terminal of a plug than the other, it would not be true that, while of the two types of terminals in practical use—the end of a small wire and a comparatively large iron or steel surface—a great many of the spark plugs in use have the same kind of terminal connected to the central or insulated part of the plug and hence the coil, perhaps as many other equally popular plugs have connected to outside or grounded side of plug. Finally, very few, if any, of the spark coils on the market have either primary or secondary binding posts marked in any way, so that it would be possible to determine the polarity of spark produced, even if it were desired. This shows, perhaps beyond all argument, that the polarity is immaterial, for the spark coil manufacturers could readily mark their product, were anything to be gained thereby.

But the writer is not writing particularly from the standpoint of getting at the scientific truth in the matter, but is interested rather in the practical effect on the industry. There are several automobile manufacturers in this country who seem to know that grounding the positive side of a battery is just as good as grounding the negative side, and regularly practice it. What if C. P. D.'s automobile is wired this way? He will either lose faith in the maker of his vehicle or in MOTOR AGE, and seeing the difference in opinion between those who profess to know, and not realizing that this is a question of some importance, he may perhaps be inclined to consider the present status of automobile engineering just a little less progressed than he had previously thought it to be.

In another reply G. B. C. is instructed how to determine the current consumption of a coil, and is told that the wire from the ammeter is connected to the negative of the battery, while as a matter of fact so long as the ammeter is in series with the battery and coil, it does not make any difference whether the ammeter is between the zinc and the coil or between the carbon and the coil; but unless the ammeter is suitable for an alternating current, which is not likely, it is necessary that the ammeter binding post marked + is connected to the wire leading to the carbon. It is immaterial, however, whether this goes directly to the carbon or goes through the coil on the way.

A. Roethlisberger is told that perhaps his motor will show a little more speed with a jump spark system in ignition than with make-and-break ignition. But will it? The writer is well aware that this is a very popular fallacy in this country. It is natural, too, that many competent engineers, so early in the development of such a rapidly progressing evolution, should not have been able to accumulate accurate information on this detail. No doubt many designers have been deterred from using the contact spark on high-speed motors because of the difficulty of designing electrode operating mechanism that would be quiet and durable. The contact spark, too, as generally used, requires so much more current than jump spark that this alone makes it almost prohibitive when batteries are used. The European manufacturers have demonstrated that make-and-break electrodes can be operated satisfactorily on high-speed engines, and by using the alternating current magneto have not only settled the question of battery economy but increased the simplicity and reliability. As to the reliability, we have but to turn to the

large stationary engines so much used in Europe, especially in Germany. They can, do and must run with certainty, because the nature of their service is such that they would be money losers if they could not be depended upon. Of course, the system should be used which is most reliable, and a little loss in power, if it introduced any uncertainty, should not be considered. That make-and-break ignition for high-speed motors is gaining in popularity both in Europe and this country, there can be no doubt. There is at least one American car on the market with make-and-break mechanism, leaving little to be desired. From present available data, we have reason to believe that make-and-break ignition is more dependable than the jump spark, but whether it is more or less so, we certainly cannot say that the jump spark will give more speed or power. We are aware that many comparative tests have been made—generally using a suitable jump spark outfit and an unsuitable make-and-break outfit and the experimenter has apparently proved that the jump spark made the engine pull the best. Electrode operating mechanism designed along lines proving satisfactory for slow stationary engines is frequently responsible for such results. While such methods are to be expected and the results of such tests always dominate the earlier life of any engineering evolution, they nevertheless recall the statement made to the writer a few years ago by a large Western manufacturer of gas engines. Referring to the high-speed engines used on French automobiles, he stated that they were a fake, and that he had tried it out thoroughly and found that no power was to be gained by running an engine over 300 or 400 revolutions per minute and that the product of the torque and speed was greater than that at any higher speed, because the mixture could not burn fast enough to follow up the piston. It developed on inquiry that he had derived his conclusions from tests made on an engine having valves and passages, which appliance had shown suitable for slow speed work, but which was, of course, wholly inadequate for high speed.

An investigation as to the relation between the heat energy in watt-seconds dissipated in the spark, and the pressure curve as shown by indicator diagram, shows quite forcibly the advantage of having this heat energy considerably greater than can be practically obtained from a jump spark. In fact, an investigation of this kind proves conclusively that the torque and speed will both be increased by the contact spark, if the latter is properly applied. This is even more true of high than of low-speed motors. There is also still more practical proof. By far the great majority of automobiles have been equipped with jump spark and only a very small per centage of racing machines have used make-and-break ignition, and the fact that a small minority of cars so equipped have won many important races indicates that there is probably some particular advantage in contact spark ignition for this service, where reliability, power and speed are so essential. Referring to the recent major events, W. K. Vanderbilt's straightaway record was made with contact spark and alternating current magneto, and the recent Gordon Bennett cup race was won by the car fitted with this system of ignition. Another recent performance depending, probably more than either of these, on the power and speed of the engine is the marvelous speeding of the American

automobile boat Standard. This speed machine, that rivals the navy's torpedo boats, is equipped with contact spark and alternating current magneto. In the face of these facts, should we longer say that a motor boat will show a little more speed with jump spark than with make-and-break ignition?—B. P. Remy.

There is a tendency toward similarity of construction in automobile work which is approaching standardization. The grounding of the negative wire is one of these points. Any one at all familiar with foreign and American design knows that generally the negative is grounded. The European manufacturers first adopted this point and nearly all coils on their machines are marked either P or + so that the positive battery terminal will be run to the coil. This construction allows direct connection on the positive side of the line with the switch on the ground or negative side. The point is one of practice and not theory. In electrical work generally it is common practice to ground the negative and MOTOR AGE sees no reason why, as long as this point has been quite generally adopted abroad, and in this country, that it should induce such a discussion upon its psychological relation. The statements regarding the high tension positive and negative discharges hardly bears upon the point in question inasmuch as the direction of flow in the secondary could hardly be determined by an amateur and the wrong secondary would be as liable to be grounded as connected to the plug.

The point brought out by the correspondent relative to the necessity of correct design in a make-and-break device, merely bears out the stand taken by MOTOR AGE in this connection. Regardless of what may develop in the line of make-and-break ignition, it is a fact that the small experimenter or the user of a car, who has his choice between the ordinary make-and-break systems, such as have become familiar on account of the stationary engine, and the simple jump spark systems of ignition which are commonly used on automobile motors, will have better success in high-speed work with the latter. That there is a question in the matter of selection of the two types of ignition MOTOR AGE does not gainsay. In replying to such queries as that of the correspondent brought to attention, the practical point of view, looking to the adaption of means readily at hand is taken, rather than the theoretical stand leading into greater complication and some experiment. No one can say that it is as simple a matter as applying a jump spark system to apply a make-and-break device that will attain a speed of 1,500 oscillations per minute without racking itself and producing a wear that

makes it almost impossible to permit the interruptions to occur on quarters, as for a four-cylinder motor. In fact, there is some doubt in the minds of a good many people if such operation of a make-and-break device is at present possible. If Mr. Remy will furnish it MOTOR AGE will be glad to publish the test log and plotted curve showing a speed torque increase due to the use of make-and-break ignition. It is highly probable that other factors than merely that of type of ignition have had a good deal to do with the success of recent racing machines equipped with make-and-break ignition.

As to the Vanderbilt car and its ignition system, Mercedes cars at least are fitted with both jump spark and make-and-break ignition, so that either one may have been used.

CHARGING SPARKING BATTERY

San Francisco, Cal.—Editor MOTOR AGE—How can a 40-ampere-hour sparking battery be charged from a 110-volt current—L. R. B.

In Fig. 1 is shown a simple charging board arranged for this purpose. In the positive side of the circuit are shown five incandescent lamps of 32 candlepower each. In the circuit between these lamps and the negative side of the main line is a knife switch with proper connections to the battery, it being assured that the positive charging wire is attached to the positive battery terminal. The polarity of the charging current may be determined by placing the bare wire ends in a glass of water to which has been added a small amount of sulphuric acid. Bubbles will rise the more rapidly from the negative charging wire, which, of course, should be attached to the negative battery terminal. When all of the lamps are screwed into their sockets far enough to light there will be 5 amperes flowing to the battery, one for each light.

Keep the battery on charge until the cells "gas" and bubbles form, the cell caps having been previously removed. After the battery is "gasing" freely, unscrew all but one lamp and leave the battery until it will "gas" on 1 ampere. Then the battery is fully charged. Cells when charged should register $2\frac{1}{2}$ volts each, or for a 4-volt cell, 5 volts.

In case the voltage of the charging current should be 220 volts a charging board as arranged in Fig. 2 would be used. In this case the lamps in the resistance are still 110-volt, 32-candlepower lamps, but each pair is considered as a unit of 1 ampere. It is advisable, but not necessary, to put a fuse between the main line and the lamps. The switch may be dispensed with, but for obvious reasons it is better to have it.

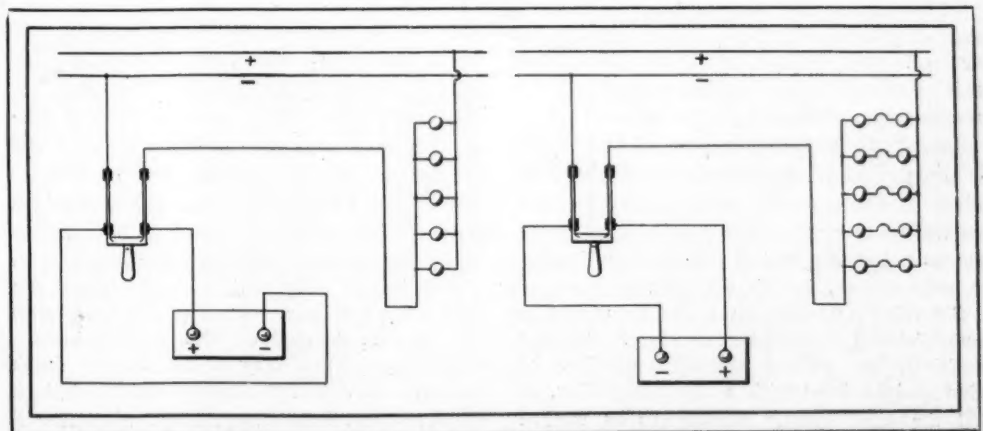


Fig. 1

CHARGING IGNITION BATTERIES

Fig. 2

AUTOMOBILE DEVELOPMENT

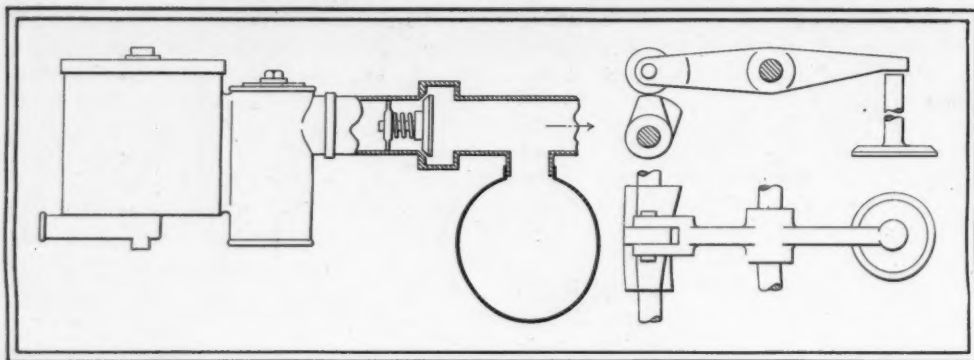


FIG. 1.

NEW ENGLISH SYSTEM OF INLET CONTROL

FIG. 2.

NEW DISTANCE GAUGE

J. W. Jones, 127 West Thirty-second street, New York, manufacturer of the Jones speedometer, has completed a new instrument for measuring distance, known as the Jones odometer. It is made for attachment to the dashboard of an automobile and is actuated by a flexible shaft and gear-drive in a manner similar to the Jones speedometer. The large gear wheel is attached to the front wheel of the car. A smaller gear is carried by a ball-bearing shaft, supported on the steering arm by means of an attaching clamp. The odometer proper is attached to the dashboard of the car in any convenient position and is connected with the drive-gear on the wheel by means of a flexible shaft. The small gear shaft support is provided with a swivel base, which permits the gears to separate in the event of any obstacle, such as a stone, getting caught in the teeth, and thereby preventing any damage to the gears. By a series of different gears the odometer may be adapted to any standard wheel of from 28 to 36 inches in diameter. The change may be made by simply removing a cotter pin, and changing the smaller gear for one of different diameter and number of teeth. There is a trip attachment that can be re-set by pressing in and at the same time turning the projecting stem.

NEW SYSTEM OF CONTROL

A Briton has devised a system of motor control which is supposed to tend toward economical and smooth running of the engine and which is attracting some little attention in England. The two constructional features upon which the operation of the system depends are shown in the accompanying illustrations. As shown by Fig. 1, the fuel supply to the motor is through an ordinary float feed carburetor, but in the inlet pipe leading from the carburetor to the motor is a large check valve. Beyond this valve is a branch pipe opening into a flexible gas bag, such as is used on stationary explosive engines using gas for fuel. The next difference in construction is in the mechanism for the control of the mechanically operated inlet valve.

Instead of the ordinary cam, which controls the time of opening and closing of the inlet valve, a conical-shaped cam is fitted. This has its opening face in a parallel line to the cam axis, but the closing face is shaped away to make an angle with the axis.

The valve operating lever can be moved in a parallel direction along its center. One end of this lever carries a narrow cam roller, the other end is fitted with a T piece striker, so that the valve spindle can always be worked by it whatever the position of the lever rela-

tive to the valve spindle. When the lever is moved so that the cam roller is near to the end of the cam the inlet valve is opened at the beginning of the inlet stroke of the piston, and is closed at the extreme outward movement, so that a full charge of gas is sucked from the carburetor through the valve and the charge is fully compressed in the usual way.

Movement by the lever towards the end of the cam allows of an increase in the time which the inlet valve is kept open, and, consequently, instead of the full charge in the cylinder undergoing compression in the usual way, it is returned through a valve into the gas bag, since the valve has returned to its seating by the action of the spring.

When the inlet valve finally closes the gas remaining in the cylinder is compressed and then fired by a spark in the usual way.

The inventor finds that, by using only $\frac{1}{2}$ -inch of the compression stroke out of a possible 3-inch stroke, the engine gives the same power and propels the car under the same condition as it did with the old throttle valve nearly closed, but with the important difference that the car now runs as smoothly as a steam car.

The advantages claimed for this method of control are: At all times there is a free passage for mixture to the engine; the exhaust valve is unaffected, and no exhaust valve lifter is required; the wear and tear on the engine are reduced, as the compression can always be regulated to suit the work the engine is required to perform; thirty per cent reduction in the amount of cooling water required, as the use of the throttle heats the engine and this arrangement does not; the engines can be run free when the car is standing for double the time with an equal heating of the water as when a throttle valve or exhaust valve lifter is fitted; the mixture in the cylinder is as clean when running at 200 revolutions or at full speed, and a better firing mixture is obtained at low speeds, owing to the mixture being properly mixed in the gas bag; freedom from vibration, the suction stroke never being against a partial vacuum.

It is further claimed that if the car will run at 4 miles per hour down a grade there is no need to start the engine with a starting handle, it being only necessary to put in the clutch and give the engine the use of the last $\frac{1}{2}$ -inch of piston travel for compression, when it will at once start up.

The carburetor, after starting, is self-regulating, and no extra air valve or other device is required at whatever speed the engine runs.

When given about 1 inch of compression the engine may be started easily without fear of back firing and will readily pass over the next compression; cleaner sparking plugs and ability to run with little power at high speed.

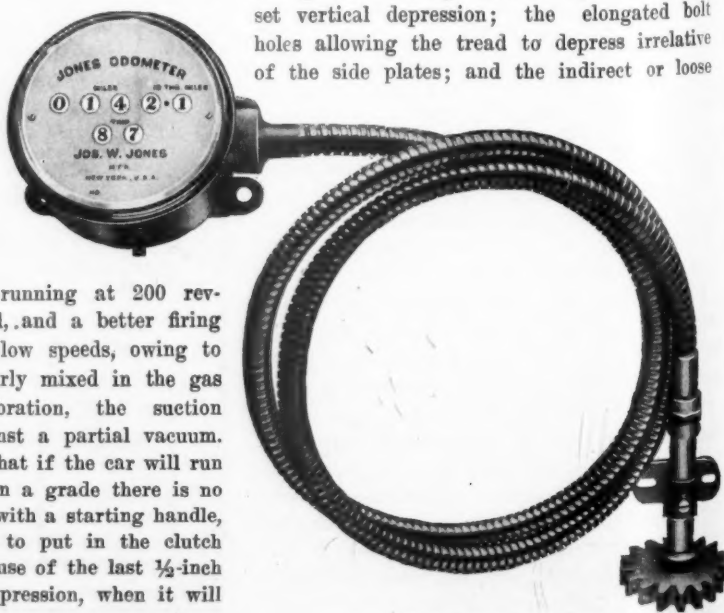
In view of the fact that gasoline has a destructive action on rubber, it would probably be better to make the bag of a flexible leather, or its equivalent, and support it in an inverted position by a light frame. There may also be the possibility, under certain conditions of mixture or ignition position, that a backfire would take place in the bag, but probably such could be guarded against. It is said, however, that careful trials have been made and that the results back up all the claims made by the inventor.

DETACHABLE SOLID TIRE

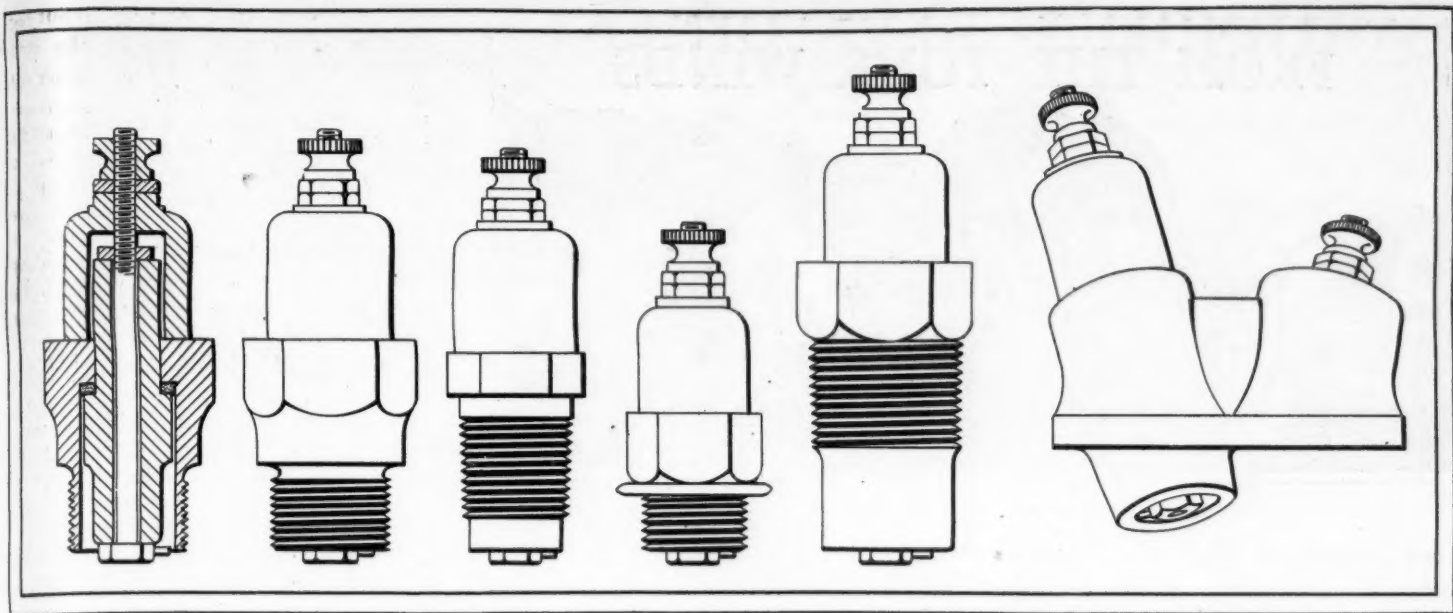
In the accompanying illustration is shown sectionally a solid tire which is the invention of a Chicago physician and which has been given rather hard testing by several Chicago automobilists. The tire is simple and seems to be entirely practical. Tires which have been in use have been run for several thousand miles without showing more than slight deterioration and in the item of comfort the tire, while if not producing the resiliency of a pneumatic, at least is sufficiently elastic to provide a degree of comfort in riding so little below that of a pneumatic-tired car that it is not greatly appreciable in ordinary riding.

The tire is deep and narrow in section, and is narrower in its middle portion than at its tread and base. It is placed on a flat steel rim secured to the wheel felloe and is not rigidly fastened in any way. On each side is a loose steel plate in the form of an annular disk. These disks are loose from the tire but are in easy working engagement with leather rings on the felloe of the wheel and are loosely connected with the tire by a multiplicity of cross bolts. These bolts pass through holes which in width substantially fit the bolts, but which are about double the diameter of the bolts in depth. These holes are strongly lined with fabric.

It is obvious from the construction that the tread of the tire in being depressed is free to move freely, the space between it and the side plates allowing sidewise expansion to offset vertical depression; the elongated bolt holes allowing the tread to depress irrelative of the side plates; and the indirect or loose



THE JONES ODOMETER



TYPICAL SECTIONAL VIEW SHOWING CONSTRUCTION OF STA-RITE PLUGS AND VIEWS OF SEVERAL LEADING PATTERNS

attachment of the plates allowing them to move with the tire as the latter depresses in the constricted or narrowed portion below the tread.

It is said that on account of the fact that when depressed the tread fills the space between the side plates the tire is not subject to the reception of mud and dirt and that hence the open space on each side does not clog. It is also asserted that there is little if any tendency to wear between the parts which move relative to each other.

The inventor of the tire is Dr. C. H. Bryan, who is now negotiating with Morgan & Wright, of Chicago, for the regular manufacture and general introduction of the tire.

WANTS TO BUILD COMPLETE CARS

The Broc Carriage & Wagon Co., one of the largest carriage making concerns of Cleveland, has been doing a large amount of body building and finishing for two or three leading manufacturers there, and the company is now planning to go into the manufacture of complete automobiles for another reason. Several experimental cars are being built, but the exact model has not been decided upon. It is expected that the machine will have a four-cylinder vertical motor developing from 16 to 20 horsepower. J. W. Pulford is at the head of the automobile department.

DOES AWAY WITH ROPES

To secure proper traction has been one of the great difficulties of automobiling on muddy and otherwise slippery roads. Many devices have been adopted in the endeavor to attain the desired end. Most of them have been of the order in which ropes or chains are wound around the tires of the rear wheels. The Blick Williams Co., of Indianapolis, is introducing an appliance which is of an entirely different nature, being a block which is clamped to the tire, a set of several blocks being used on each wheel. The blocks for 28-inch wheels are 10 inches long, and in this case five are used on each wheel, which thus equipped has alternating spaces of 10 and 7 inches covered and uncovered. Each traction block is a light malleable iron shoe fitting the tread of the tire on its inner face and being attached by means of a strap clamping device which encircles the rim of the wheel. The outer face of the shoe has several crosswise and slightly diagonal ridges to give traction

and a center longitudinal ridge. The blocks weigh for a set of ten for two small tires about 25 pounds. They are made in several sizes extending upward to a set of ten weighing 40 pounds for large touring cars. When not in use the blocks may be packed closely together to be carried under the seat or in any convenient luggage box on the car.

PLUGS FOR ALL MAKES

One policy in business is to try to make the customer take what the seller wants to make for him. Another policy is to make for the customer what he wants so long as his wants are in keeping with the business of the seller. The latter is evidently the policy of the R. E. Hardy Co., of Detroit, Mich., for in its manufacture of Sta-rite spark plugs it has endeavored to incorporate its peculiar system of construction in a wide range of patterns suitable for numerous makes and styles of motors. A few of these various styles are shown in the accompanying illustration.

The principle of construction is the same in all and is well shown in the sectional view. As the end of plug entering combustion chamber is much hotter than the outer end, the

porcelain is made in two pieces to take care of the difference in temperature. The inner porcelain is turned in a lathe, so that the material is much closer and tougher than if made in a die. Ample air space is provided, so that soot and oil do not cause short circuiting. The shoulder of the inner porcelain is forced against against packed shoulder of shell instead of away from the shoulder. It is therefore very easy to keep the Sta-rite plug tight. The short protected point is not warped out of position by the intense heat.

Flat steel tension washers are placed under the set nuts, so that they do not work loose. These washers with the vulcabeston packing washers allow of difference in contraction and expansion between the metal and porcelain parts of the plug. The shell of the plug is made of steel and all exposed metal parts are nickel plated.

RECENT INCORPORATIONS

Boston—Boston Automobile Garage Co., capital \$25,000. E. A. Cook, president; George C. Gouther, treasurer.

Wilmington, Del.—Wilmington Automobile Co., capital \$20,000. Incorporators Horace W. Ganse, Joseph Bancroft and Richard R. Banks.

Northampton, Mass.—Warner Motor Co., capital \$30,000. Incorporators D. C. Bartlett, president; R. P. Estey, treasurer; L. E. Warner and D. N. Nash.

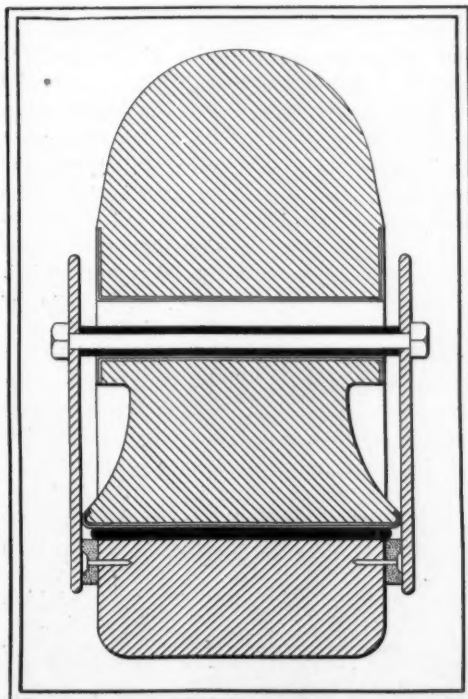
Milwaukee, Wis.—Northwestern Mfg. Co., capital \$60,000, to manufacture motors. Incorporators, William P. Harper, William S. Smith and John P. Harper.

Newark, N. J.—The Webb Co., capital \$50,000. To manufacture motor vehicles and machinery. Incorporators Walter H. Bond, Paul Munter and Joseph Gerrardt.

Chicago, Ill.—Western Automobile Co., capital \$5,000. To manufacture and repair automobiles. Incorporators John E. Bensley, Neville McKeever and Harry J. Dunbaugh.

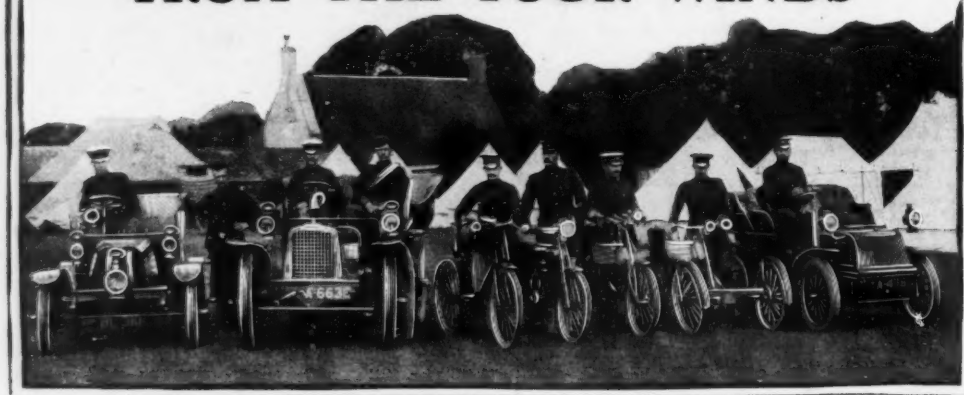
Niagara Fall, N. Y.—Cataract Machine and Automobile Co., capital \$5,000. To manufacture automobiles. Directors Fred V. Simpson, Max Amberg, S. P. Franchot, Dr. W. A. Scott and Fred J. Brown.

Jersey City, N. J.—Kahn-Stern Co., capital \$15,000. To manufacture and deal in automobiles, motor cycles, carriages, wagons, etc. Incorporators Louis J. Kahn, Emmanuel J. Stern and I. and Faerber Goldenhorn.



THE BRYAN SOLID TIRE

FROM THE FOUR WINDS



MEMBERS OF THE BRITISH VOLUNTEER MOTOR CORPS

Dayton's Number—Up to a fortnight ago licenses for eighty-five automobiles and three motor cycles had been issued by the local authorities of Dayton, O.

Show in Denmark—An international automobile and cycle show will be held in Copenhagen, Denmark, next year, either during the last week of March or the first week in April.

Don't Hit a Hog—An automobilist was fined \$150 last week in Chambersburg, Pa., because he assaulted a farmer who, according to the motorist, had taken up too much room with his horse and buggy on the highway.

Chance for the Daring—According to l'Auto, of Paris, C. L. Charley, the Paris agent for the Mercedes cars, has offered a prize valued at \$10,000 to be awarded to the owner of the first motor boat which will cross the Atlantic from Havre to New York.

Good Lady Driver—A woman driver, Miss Jack Latta, recently drove in her Pope-Toledo car from Indianapolis, Ind., to Goshen, in the same state, and covered the distance, 144 miles, in 7 hours and 40 minutes, which is 1½ hours better than the previous best time.

Raced Around Berlin—A motor cycle race around Berlin, Germany, was recently run. The distance was a trifle over 149 miles. There were forty starters, thirty-two completing the journey. The best time was made by R. Muller, who covered the distance with his 3-horsepower Brennador in 6 hours 48 minutes 33 seconds.

Want Buses—The government of Ceylon is said to be seriously considering the proposition of substituting on all good roads in that country light automobiles for the old stage coaches which still exist on important routes for mail and passenger traffic. The required speed is 30 miles an hour, and each car must carry six passengers, 300 pounds of mail and 26 pounds of baggage. American makers might get a good order by proper efforts.

Jardine With Royal—The Royal Motor Car Co., of Cleveland, has secured the services of Robert Jardine as chief mechanical engineer and general superintendent. Mr. Jardine has been connected with the automobile industry for 10 years. His most recent connection was with the Federal Mfg. Co., prior to which he was mechanical engineer and superintendent for the Berg Automobile Co. Still previously he was engaged in similar pursuits in Europe, having been with A. Clement & Co., Malicet & Blin and the Elec-

tro Motion Co. Altogether he spent over 5 years in automobile factories in France and England.

English Show Dates—The fourth annual Crystal Palace automobile show will be held in England from January 27 until February 4. The show will be open to the public from 11 in the morning until 9 at night.

Four to One—In the latest catalog of technical books sold by A. C. McClurg & Co., of Chicago, the section devoted to the subjects of automobiles and flying machines, lists four works upon the former and one upon the latter subject.

Trying To Be Honest—The jurors on awards at the St. Louis exposition are now at work on the examination of the automobiles displayed there. They are going at the job carefully and are spending considerable time in the examination of each car. It is either a swell "grand stand" play or a very honest jury.

Want Tests Made—At a recent meeting of the Burgesses' Association of Christ Church, New Zealand, a resolution was adopted urging the city council and the electric tramway board to introduce electric motor buses at the earliest possible date over a route of their choice, so that tests might be made to determine whether the electric motor bus service is better than the electric tramway system.

Promises Orders—At this year's army maneuvers in Germany twenty-two motor cars and thirty-four motor cycles will be used for different classes of work. The automobile section of the railway brigade having only seven cars and six motor cycles, the other vehicles and machines were rented and the manufacturers were also promised by the general staff that if their cars and motor cycles give entire satisfaction they will be favored with orders as soon as they are needed.

Did Not See the Town—L. W. Conklin, of the Packard Motor Car Co., of Detroit, was last week arrested at Birmingham, Mich., for exceeding the speed limit. One of the cops said the car tore through the village at such a rate that the suction tore big branches off the trees and leveled some of the fences. "Better try another brand of smoking," suggested Justice Campbell. "I suppose he was only hitting the high places." "Worse than that, your honor," said the copper earnestly, "and he was hitting only every second high place." "Likely enough," said Conklin nonchalantly. "I was showing a customer how fast it could run, and I went through the place so fast that I did not see it. I am only

surprised that any one could have seen me." The justice accepted this as a plea of guilty. "Twenty dollars fine, \$3 costs," he said laconically, and Conklin paid.

Exports Lead—During the first 6 months of this year Germany imported 753 motor cycles valued at \$104,250, or \$136.50 each, and exported 1,118 motor cycles valued at \$184,775, or \$165 each.

Good Showing, Indeed—The Auto Vehicle Co. of Los Angeles, Cal., maker of the Tourist, expects to end this year's business with a total sale of 120 cars. It employs about fifty men and the floor space capacity is over 20,000 square feet.

Detroiters Won—A 5-mile race was run in Bethlehem, Pa., last week at the state fair meeting. There were two Orient buckboards, one Rambler, one Ford and one Cadillac in the race, and the latter won, covering the 5 miles in 9:21. The first prize was \$30 and the second prize, \$20, was won by the Ford.

Meet at Worcester—At the recent race meet which was held in Worcester, Mass., in connection with the state fair, Louis B. Ross, in a Stanley steamer, won the principal event, a 5-mile free-for-all race, in 7:43½. He also won the 3-mile race for steamers in 4:34¾, while Melvin Dixon, in a Stevens-Duryea, won the 5-mile race for gasoline cars weighing from 881 to 1,432 pounds in 10:54¼. Fred S. Wilder, in a Pope-Tribune, won the 3-mile race for cars weighing from 551 to 881 pounds, covering the distance in 7:57¾.

Only a Doctor Now—A. L. Dyke has retired from the A. L. Dyke Automobile Supply Co., of St. Louis, of which he was founder. Robert F. Britton, who was formerly vice-president, is now president and in full charge of the business. Mr. Dyke is just now devoting his entire time and energy to the business of revising his "Diseases of a Gasoline Automobile" and has become established in business at 311 Pine street, St. Louis, Mo., as publisher of this book under its new title of "Remedies for a Gasoline Automobile" and his other medical work, "Anatomy of the Gasoline Automobile."

Broke State Records—There were several thousand spectators at the motor cycle and automobile races held in Baltimore Labor day. The state motor cycle records for 1 and 2 miles were broken by Charles Callahan, who rode a 5-horsepower Orient machine. He covered 1 mile in 1:25 and 2 miles in 2:47. Stanley Zell in a Winton won his match against A. Atkinson, who drove a Rambler. In the 5-mile free-for-all the Winton defender was defeated by Howard Gill, who drove a Stanley steamer. The time was 7:46¾. George S. Dickey in a Peerless won the 2-mile race for touring cars carrying four passengers. The time was 4:45.

Promises a Future—The Auto Express Co. is the name of a new concern which began business at Toledo, O., last week. Three cars have been installed and General Manager Nighswander stated that it would be necessary to install two more cars within the next week or 10 days. "The people like the new system of delivery, it being so far superior to the old way of delivery by wagons that our business has been rushing from the start and is rapidly increasing," said Manager Nighswander. "We have also installed a police and fire notification system and by next spring we expect to have 800 subscribers. In this work the automobile is used exclusively also. We have also received during

the last few days orders for ambulance service, so it is quite probable that we will place an order for an automobile ambulance within a short time."

Three Kansas Races—There are to be three automobile races at the state fair which will begin in Topeka, Kan., September 17. The prizes aggregate \$600.

Tupper Lake Up-To-Date—A liveryman at Tupper Lake, N. Y., has ordered an electric automobile that will carry twelve people, and to be used between Tupper Lake and the railroad station at Faust.

Big Power, Great Speed—Robl, the German, has a 32-horsepower two-cylinder motor cycle tandem which has developed a speed of 85 miles an hour. French pace followers use frequently 18 to 24 horsepower motor cycles as pacing machines.

Travels in Automobile—C. W. Morrison, an undertaker in Greenfield, Ind., has purchased a large automobile with which he intends to make calls when his services are needed. He has also associated with C. A. Kinder and George Hacker of the same locality for the purpose of organizing an automobile livery.

After the Big Event—Four French counties have already applied to the Automobile Club of France for the privilege of having the James Gordon Bennett race run within their territory. It was reported that the city council of Vichy, in the county of Allier, has decided to spend \$60,000 towards the expenses of organizing the race.

Motor Cycle Awards—The following awards have been made by the judges for the recent 1,000 miles motor cycle trials of the Auto Cycle Club of Great Britain and Ireland: First class certificate and gold medal to the 2 $\frac{3}{4}$ -horsepower Humber, the 3-horsepower Bradbury, the 3-horsepower Quadrant and the 3-horsepower Rover. First class certificate with a silver medal to the 3 $\frac{1}{2}$ -horsepower Brown, King and Rex motor cycles. A first class certificate and a gold medal was also won by the 3 $\frac{1}{2}$ -horsepower Phoenix trimotor.

Novel Competition—A novel automobile competition was held in England some time ago. It consisted in starting a car from a certain place, there being a lady with each driver. At another point the lady was obliged to get out of the car, fill a glass with water, return in the car with the glass to the starting point. The winning car was the one which had gone through the ordeal in the quickest time. The distance was about half a mile and there were a score of competing cars. R. M. Wright and Mrs. Brook in a 10-horsepower Clement made the quickest trip, 1 minute 26 seconds. The second was 6 seconds slower.

Kept on Going—Charles S. Brown, son of Alexander T. Brown of the H. H. Franklin Mfg. Co., had a peculiar automobile accident a few days ago. He was running near Shackleton's point on Oneida lake, New York, when a thunder storm came on. He steered his machine into a barn. The doors were open and the machine started in with a rush. The impetus was such that it did not stop on the barn floor but went right on through the rear doors. There was a big drop from the floor to the ground, where the farmer had thrown all the barn waste and made a pile. When the machine reached the door it dropped, but the gearing caught and the machine hung half in and half out, inclined at

an angle of 45 degrees. Mr. Brown also kept on going and landed on the pile of refuse, his feelings more injured than his body. After some time the machine was hoisted to the barn floor and run back to town.

About Billy's Lamps—An interesting booklet recently issued by Smith & Mabley, of New York, is the catalogue of the automobile lamps and headlights made by one Billy, of Paris, Smith & Mabley being the importers of these lamps.

Long Runs in France—Long runs in a single day are the vogue in France just now. M. de Lavaur recently covered 335 miles in less than 20 hours in a 6-horsepower de Dion-Bouton car he had purchased in 1902. Another tourist traveled 397 miles in less than 20 hours in a 10-horsepower car.

Reduced Prices—A reduction in price on two of its models was announced this week by the Pope Manufacturing Co. Hereafter the Pope-Hartford, with tonneau, which has been listed at \$1,200, will be sold at retail for \$1,000, while the Pope-Tribune runabout will be put on the market at \$500, instead of the former price of \$650.

Three Teams Assured—The international motor cycle cup race which is to be run in France September 25 has created as much interest in motor cycle circles as the James Gordon Bennett race does in the automobile world. Although the event was announced only recently the recognized automobile clubs of Germany, England and Austria have decided to send teams.

Motor Bus for Oregon—An automobile line will be inaugurated in Oregon November 1. It will start at Cross Keys and end at Bend, the journey to be made in 5 hours, whereas it takes from 14 to 18 hours with the present coach system. There will be a private roadway for the motor cars, with an 8-foot track, well crowned. The first bus will have a 30 horsepower motor, a seating capacity for twelve persons, and pull a trailer which will probably be loaded with luggage, express shipments and mail.

Looks Suspicious—An audacious thievery was committed September 8 at the automobile and cycle store of Wright Elsom, Jr., 141 North Boulevard, Oak Park, Ill. During the forenoon a young man called at the store and examined several motor cycles. He said he was out of college and his father had promised him a motor cycle. He returned in the afternoon and chose a Thor at \$200. He asked that the machine be put aside, as he was going to see his father and return to get the machine. That night the machine was stolen.

To Prevent Dust—The first steps toward the formation of an important organization, which will probably be named the Society for the Prevention of Road Dust, were taken recently in Munich, Germany. There were delegates from the Bavarian ministry, the Bavarian Automobile Club, the university, the Munich city council and many learned men from other parts of Germany. Dr. Uebel in summing up his speech brought out the following points: That the best means to prevent dust lay in the improvement of road building; that dust could be done away with

by impregnating the road surface; that the results obtained in using Westrumite have been so satisfactory that further experiments should be made.

Hotchkiss Cars Coming—Five new Hotchkiss cars will be brought to the New York automobile show by Achile Fournier, who will also bring a racing car in which he will compete at the annual Ormond Beach race meet.

Bus Line in Denmark—A concern has been organized in Copenhagen, Denmark, with a capital of \$85,000 for the purpose of establishing automobile passenger and merchandise services through the country. A number of motor vehicles have been purchased from a Danish and from a French manufacturer.

It's an Ill Wind, Etc.—The Winton Motor Carriage Co., of Cleveland, is immensely pleased over the fact that the manager of its Cleveland branch was rudely arrested the other day on the charge of driving a Winton Quad up the South Water street hill at 28 miles an hour. It is worth the price of a fine to be publicly proclaimed as having driven that fast up that hill.

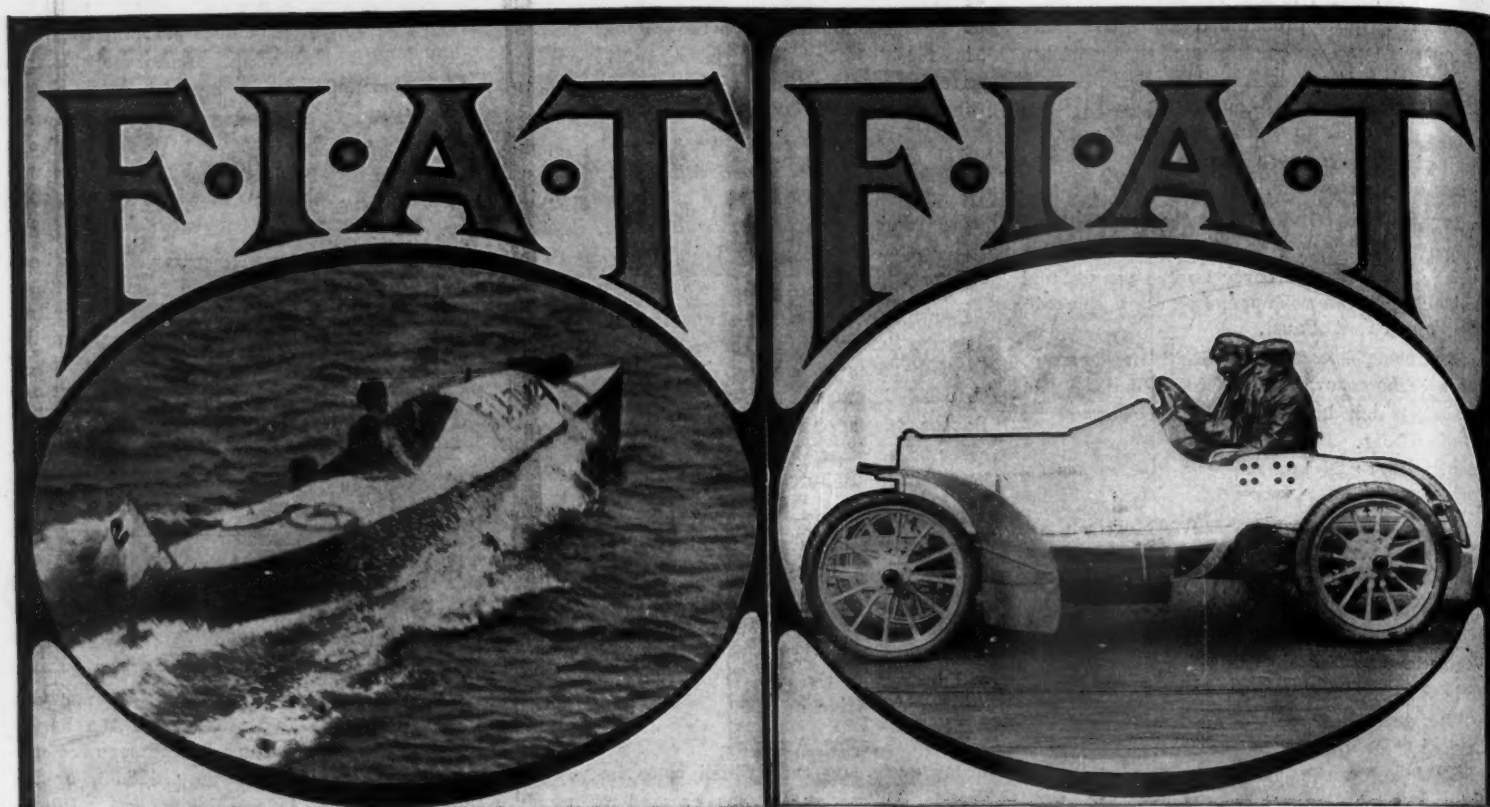
Cheap Traveling—An English motorist who has ridden 1,500 miles since the beginning of the season on a 3 $\frac{1}{2}$ -horsepower machine says it cost him only \$28.53, or 1.9 cents per mile. Among his expenses figure the following items: Gasoline, \$7.25; lubricating oil, \$2.40; charging accumulators, \$1.20; new pinions and cams, \$3.84; complete new piston, \$4.08; new lubricating pump, \$1.56; other accessories, \$2.36; repairs, \$1.60; repairmen, \$4.08.

Doing Good Business—The Auto Traffic Co. of Pittsburg, Pa., will shortly add another bus to its line between Etna and Allison Park. During August the three machines in operation averaged 177 miles a day each. The distance is 5 miles and the line has recently been lengthened a half mile through Etna. The first car leaves at 6 o'clock in the morning and the last at 11 o'clock at night. That the new line is appreciated is shown by the decision of the owners of the toll plank road over which it runs to make extensive improvements to the road before winter.

Los Angeles to Frisco—The motor cycle record from Los Angeles, Cal., to San Francisco was established recently by C. W. Ridsden, who covered the 471 miles between the two cities in 64 hours 15 minutes, or 51 hours 25 minutes actual riding. Ridsden's route was from Los Angeles through Calabasis, Newberry Park, Conejo Grade, Ventura, Santa Barbara, Naples, Refugio Grade, Los Olivos, Geary, Santa Maria, Nipomo, San Luis Obispo, San Margarita, Templeton, Paso Robles, San Miguel, Playto, Jolon, King City, Soledad, Salinas, Gilroy, San Jose, Oakland and San Francisco.

Team Non-Stop Race—The Motor Cycle, of London, recently arranged a competition to determine which motor cycle club in the United Kingdom should hold the challenge cup offered by the London weekly. The rules of the contest were that each club could send a team of representatives and the winning team was to be the one whose riders scored the greatest mileage. The event was a 100-mile non-stop run, except at the completion of the fiftieth mile, when lunch was taken. The Coventry Motor Cycle Club won the cup, its six members having covered 485 miles, while the second team, representing the Motor Cycling Club, covered only 381 $\frac{1}{2}$ miles.





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